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ABSTRACT

This comprehension model defines and describes nine categories of comprehension, including word meanings, location/recall, translation, interpretation, prediction, application, analysis, synthesis, and evaluation. Each of the categories includes the following sections: highlights, containing a definition and questions; instructional objectives for kindergarten through grade twelve; a discussion of the topic; and learning activities for kindergarten through grade twelve. Also included are a summary of the contents, a conclusion, an annotated resources list, and a bibliography. (LL)

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TEACHING READING SKILLS, VOLUME II

COMPREHENSION

CRITICAL READING/THINKING SKILLS, K-12

(The Big 9)

Bulletin No. 246
A working copy
1974

Montgomery County Public Schools
Rockville, Maryland
Romer O. Elseroad
Superintendent of Schools

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PREFACE AND ACKNOWLEDGMENTS

Montgomery County teachers worked together on this curriculum guide in a sincere desire to offer other County teachers a document which would be useful and usable in the daily instructional program.

The topic—Comprehension—is complex. Numerous sources and resources were consulted. Many teachers, librarians, principals, and supervisors offered suggestions and recommended changes during the field testing as this Comprehension Model was being developed. These ideas were gratefully received and prompted further work on the original drafts.

The intent is that this curriculum guide be

sufficiently specific to provide an instructional framework for teachers

sufficiently broad to provide for individuality—of teachers, of students, of grade levels, of varied subject matter

sufficiently flexible to encourage EACH teacher to help EACH student grow and mature all along the Comprehension Continuum—from *literal* $\longleftrightarrow$ *critical* $\longleftrightarrow$ *creative* understandings and successes

Appreciation is extended to all those who contributed to this guide and are thus contributing to improving teaching and learning in Montgomery County. It is impractical to cite all these contributions here because this input comes from so many Montgomery County individuals, teams, and faculties. Materials and ideas were also graciously contributed by the following out-of-county individuals, school systems, and publishers:

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Thanks also go to Thomas R. Peters, Coordinator of Reading Services, and Clifford J. Kolson, Supervisor of Reading, who gave continuing encouragement during the developmental stages of this guide.

The following staff members whose assigned responsibility it was to write this comprehension guide, found the task both challenging and professionally enriching:

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--Chal women

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AN OVERVIEW

I. THE MCPS COMPREHENSION MODEL

The MCPS Comprehension Model defines and describes 9 categories of comprehension.

- A. A major student ability or goal is stated for each of the 9 categories.
- B. Specific Instructional Objectives are listed in broad grade level bands (K-3, 4-6, 7-12) for each of the 9 comprehension categories.

II. COMPREHENSION IS ...

Together, the 9 big areas of comprehension represent a continuum of thinking and meaning.

III. WHY THIS MODEL?

The MCPS Comprehension Model is sufficiently specific to offer instructional direction, yet sufficiently broad to include various theories of comprehension and varied classroom approaches to it.

IV. READING IS ...

Together, the 9 big areas of comprehension incorporate State and County reading goals and goals of education.

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*REG HIDER from *Today's Education*, March, 1973, p. 63.

THE MONTGOMERY COUNTY PUBLIC SCHOOLS' COMPREHENSION MODEL

9 CATEGORIES OF COMPREHENSION*

The Montgomery County Public Schools' Comprehension Model defines and describes the 9 categories of comprehension, which:

incorporate life-long abilities
apply to all students
apply to all subject areas
apply to all grade levels
operate throughout the school day

These 9 categories of comprehension are:

1. WORD MEANINGS
2. LOCATION/RECALL
3. TRANSLATION
4. INTERPRETATION
5. PREDICTION
6. APPLICATION
7. ANALYSIS
8. SYNTHESIS
9. EVALUATION

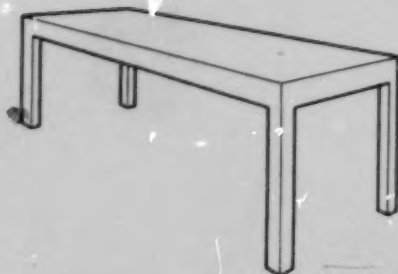
*These categories were suggested by the six categories which serve as the basis of the *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook I: Cognitive Domain*.¹ For details on Bloom's Taxonomy, see pp. 27-28 in this bulletin. For cross-reference between Bloom's categories and the 9 categories of this Comprehension Model, see p. 46.

GOALS

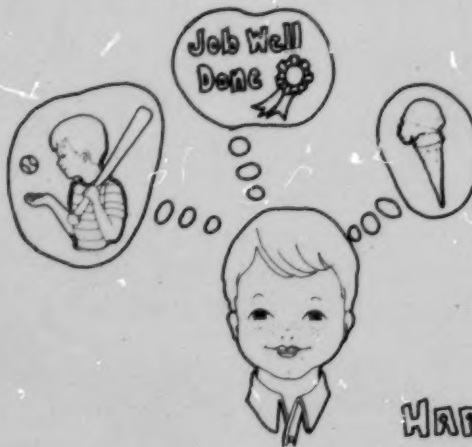
EACH CATEGORY CONSISTS OF AN OVERALL ABILITY OR GOAL FOR THE STUDENTS:

1. Word Meanings

THE STUDENT ASSOCIATES WORDS WITH OBJECTS OR IDEAS THEY REPRESENT.



TABLE



CONNOTATIVE



HAPPY

DEMOTATIVE

2. Location/Recall

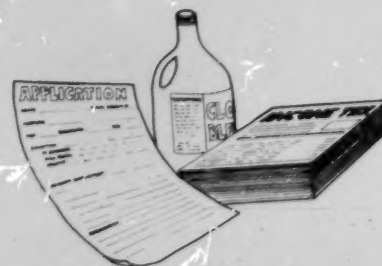
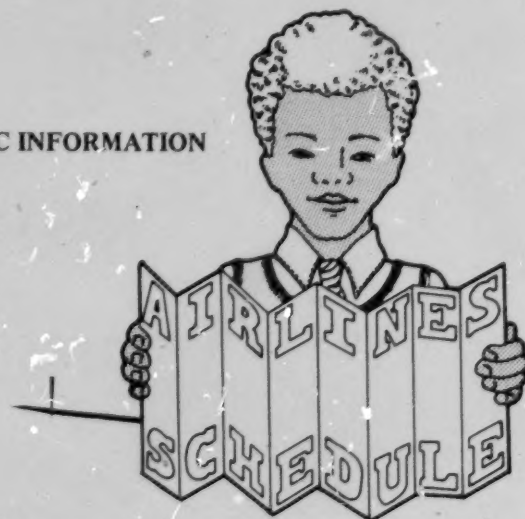
THE STUDENT LOCATES AND/OR RECALLS SPECIFIC INFORMATION



296-1234

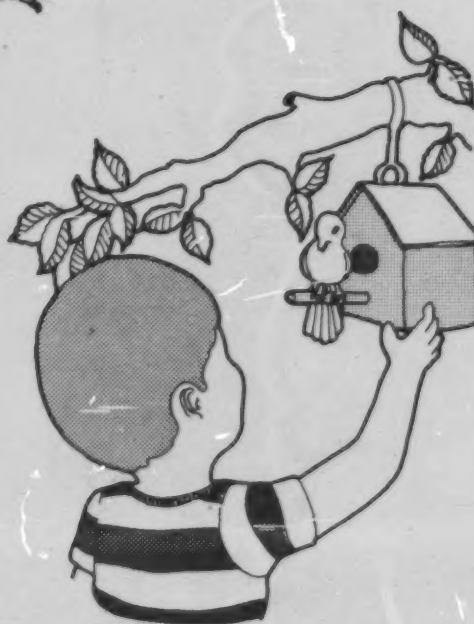
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296-1435



3. Translation

THE STUDENT TRANSLATES A COMMUNICATION INTO A DIFFERENT FORM, DIFFERENT LANGUAGE, OR DIFFERENT LEVEL OF ABSTRACTION.



4. Interpretation

THE STUDENT INTERPRETS MAJOR IDEAS
AND RELATIONSHIPS BETWEEN IDEAS.

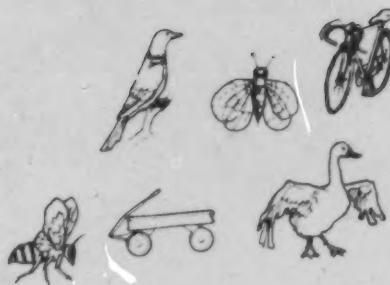
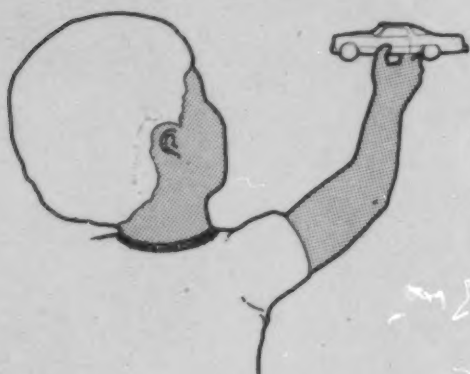
What is a Logical Sequence ?

10, 4, 8, 2,
6, 12

CLASSIFY

Wings

Wheels



Main Ideas

Subordinate Ideas

I.

A.

1.

2.

B

II.

5. Prediction

THE STUDENT MAKES
PREDICTIONS FROM DATA.



6. Application

THE STUDENT APPLIES PREVIOUSLY
LEARNED SKILLS OR GENERALIZATIONS
TO NEW SITUATIONS AND PROBLEMS.



7. Analysis

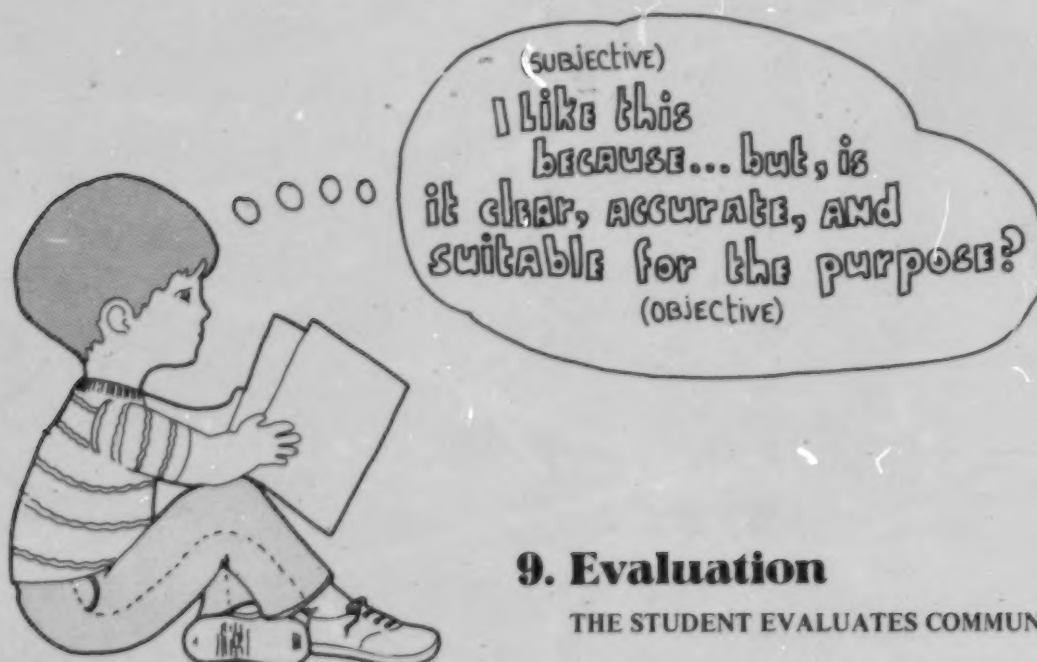
THE STUDENT ANALYZES
ORGANIZATIONAL PATTERN OF
COMMUNICATION (PICTURE, PARAGRAPH,
CHAPTER, BOOK, STORY, POEM,
REPORT, ARTICLE).





8. Synthesis

THE STUDENT SYNTHESIZES INTO
A NEW FORM OF EXPRESSION
IDEAS SELECTED FROM
COMMUNICATIONS.



9. Evaluation

THE STUDENT EVALUATES COMMUNICATIONS

INSTRUCTIONAL OBJECTIVES*

The Instructional Objectives are listed in broad grade level bands—K-3, 4-6, and 7-12—for each of the 9 comprehension categories.

Students can be expected to handle each of the appropriate objectives at their own levels of concept development and with their own levels of materials.

The Instructional Objectives are listed on the following pages, pp. 11-22.

How to Use the Instructional Objectives

1. The goal is to help students develop and mature in *all* of the 9 comprehension categories.
2. As a *beginning*, select one appropriate objective for each student from each of the 9 categories.
3. Build from this.
4. Importantly, each objective should be viewed from:

a discussion or oral language experience for the student and
a reading experience.
5. Several different Student Record Forms (pp. 47-62) are included in this bulletin so that teachers may select one which would be helpful in their own classroom situations. These may be used in alternative ways (for example: instructional purposes, grouping, on-going record keeping, conferencing with parents). Staff may prefer to develop other record forms which would better serve their particular program and/or content area. In either case, the goal is to provide learning opportunities for each student in each of the 9 categories.
6. The titles used for the 9 categories and the wording used in the instructional objectives may be a new way of thinking about comprehension.

Many teachers are familiar with the comprehension skills through the use of terms such as analogy, cause and effect, main idea. Those skills which teachers report as important for reading comprehension and those which appear consistently in the literature fit naturally and are all included in this MCPS comprehension model. Cross-references between these familiar comprehension skills and the instructional objectives are listed on pp. 43-45.

*Definition from MCPS *Evaluating and Reporting Student Progress*, revised June 12, 1973: INSTRUCTIONAL OBJECTIVES are general statements of what the student should attain.

Instructional Objectives

WORD MEANINGS

1. ASSOCIATES WORDS WITH OBJECTS OR IDEAS THEY REPRESENT

- a) Uses correctly and identifies the meanings of words used by family, peer group, and class
 - (1) Identifies by name
 - (2) Identifies by function
 - (3) Identifies by description
- b) Supplies synonyms and antonyms of given words
- c) Uses vocabulary of specific subject matter fields
 - (1) Identifies terms used in language arts
 - (2) Identifies terms used in mathematics
 - (3) Identifies terms used in social studies
 - (4) Identifies terms used in science
 - (5) Identifies terms used in business and commerce
- d) Distinguishes denotative and connotative meanings
- e) Identifies Greek and Latin roots as clues to meaning
- f) Formulates definitions in terms of class and/or distinguishing characteristics where appropriate
- g) Formulates operational definitions where appropriate

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*
		*

Instructional Objectives

LOCATION/RECALL

2. LOCATES AND/OR RECALLS SPECIFIC INFORMATION

K-3	4-6	7-12
-----	-----	------

a)	Locates information in print and nonprint materials (e.g., in a picture, filmstrip, tape, narrative, paragraph, chapter, article, or report) (Student may be asked to recall orally or in writing.)	*	*	*
b)	Locates information in different sections of a newspaper	*	*	*
c)	Uses parts of a book as guides to content			
	(1) Uses cover, title page, and/or copyright information	*	*	*
	(2) Uses table of contents to locate a general topic	*	*	*
	(3) Uses preface as an indication of content		*	*
	(4) Uses index to locate specific information		*	*
	(5) Uses typical organization of a chapter as a guide to content (title; introductory statement; boldface, italicized, and marginal headings; footnotes; summary)			*
	(6) Uses appendix and/or bibliography to locate supplementary information			*
d)	Locates information in a dictionary			
	(1) Uses illustrations as guides to word meanings	*	*	*
	(2) Uses entry words to locate word meanings, synonyms			
	(a) Alphabetizes by first letter	*	*	*
	(b) Alphabetizes by second letter	*	*	*
	(c) Alphabetizes by subsequent letters		*	*
	(3) Uses numbered definitions to find different meanings, precise shades of meaning		*	*
	(4) Uses diacritical marks as guides to pronunciation		*	*
	(5) Uses guide words	*	*	*

Instructional Objectives

LOCATION/RECALL (continued)

	Suggested Instructional Level		
	K-3	4-6	7-12
(6) Uses cross references for additional information, synonyms			*
(7) Uses special sections (Colleges and Universities in the U.S., Foreign Terms, Pronouncing Gazetteer)			*
(8) Uses Explanatory Notes, Guide to Pronunciation, and Abbreviations Used			*
c) Locates information in an encyclopedia	*	*	*
f) Locates and uses information in functional reading (e.g., employment information, sales agreement, warranty, credit card terms)		*	*
g) Locates information in a glossary		*	*
h) Locates information in a thesaurus		*	*
i) Locates information in a telephone directory		*	*
j) Locates information in a TV guide or timetable		*	*
k) Locates information in an atlas		*	*
l) Locates information in an almanac		*	*
m) Locates information in a magazine, pamphlet, or brochure		*	*
n) Locates information in a catalog or advertisement		*	*
o) Locates information in a concert or theater program		*	*
p) Uses media center guides			
(1) Uses card or book catalog		*	*
(2) Uses periodical or magazine index		*	*

Instructional Objectives

TRANSLATION

2. TRANSLATES A COMMUNICATION INTO A DIFFERENT FORM, DIFFERENT LANGUAGE, OR DIFFERENT LEVEL OF ABSTRACTION

- a) Translates from verbal form to pictorial or diagrammatic form, and vice versa

- (1) Draws a picture from verbal information
- (2) Describes pictures, cartoons, comic strips, pictorial sequences
- (3) Constructs a map from verbal information
- (4) Explains semi-pictorial and abstract symbols (e.g., map, traffic)
- (5) Constructs a graph, diagram, chart, or three-dimensional model from verbal information
- (6) Explains information shown in graphs, diagrams, charts, schedules, tables, and three-dimensional models

- b) Translates directions into action or a product

- (1) Performs a task in response to directions
 - (a) One step
 - (b) More than one step
- (2) Prepares food from a recipe
- (3) Constructs an article from directions and/or a pattern
- (4) Fills out forms (e.g., library card, mail order form, job application, driver's license)

- c) Translates from verbal form to another verbal form or to kinesics (body language)

- (1) Dramatizes, role-plays, or pantomimes
- (2) Translates literary, idiomatic, geographic, cultural, or occupational dialect into own personal (standard or nonstandard) dialect

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*

Instructional Objectives

TRANSLATION (continued)

Suggested Instructional Level

	K-3	4-6	7-12
(3) Translates figurative language into literal language			
(a) Explains fable, proverb, or parable in terms of moral principle	*	*	*
(b) Explains figures of speech		*	*
d) Translates from one level of abstraction to another			
(1) States in own words or paraphrases	*	*	*
(2) Gives an example or illustration	*	*	*
(3) Summarizes		*	*

Instructional Objectives

INTERPRETATION

4. INTERPRETS MAJOR IDEAS AND RELATIONSHIPS BETWEEN IDEAS

a) Identifies ideas

- (1) Identifies main idea, theme, or issue
- (2) Identifies or OUTLINES ideas which relate to, are relevant to, and/or develop main idea, theme, or issue
- (3) Identifies fact, historical or scientific truth, reality, possibility
- (4) Identifies fantasy, unreality, impossibility, incongruity
- (5) Identifies opinions
- (6) Identifies values and value judgments
- (7) Identifies elements which contribute to development of a literary plot
- (8) Identifies premises, assumptions (stated and unstated), hypotheses, evidence, arguments, conclusions

b) Discovers relationships between ideas

- (1) Arranges ideas in a logical or chronological sequence
- (2) Compares ideas for similarity, identity, difference, contradiction
 - (a) Classifies
 - (b) Makes analogies
 - (c) Identifies degree of similarity or difference between ideas
 - (d) Relates sets of ideas on specified points
 - (e) Determines independently points on which sets of ideas are comparable and compares them

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*
		*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*

Instructional Objectives

INTERPRETATION (continued)

Suggested Instructional Level

	K-3	4-6	7-12
(3) Draws an inference, implication, conclusion, or generalization			
(a) From evidence presented in pictorial form	*	*	*
(b) From evidence presented in verbal form	*	*	*
(c) From evidence presented in statistical or diagrammatic form			*
(4) Locates evidence that supports a given inference, generalization, or conclusion	*	*	*
(5) Locates or supplies examples of a given value	*	*	*
(6) Relates cause and effect			
(a) Given an effect and several possible causes, identifies the most reasonable cause	*	*	*
(b) Given an effect, supplies a possible cause	*	*	*
(c) Given an effect, recognizes single or multiple causes		*	*
(d) Given a chain of causes and effects, recognizes effects that become causes of other effects			*

Instructional Objectives

PREDICTION

5. MAKES PREDICTIONS FROM DATA

- a) Predicts outcome of a narrative
- b) Predicts consequences of courses of action or events within a narrative
- c) Predicts actions or reactions of a character in impending situations
- d) Predicts extension or expansion of trends, tendencies, or conditions presented in verbal or diagrammatic form
- e) Fills in (interpolates) data omitted

Suggested Instructional Level

K-3	4-5	7-12
*	*	*
*	*	*
*	*	*
		*
		*

Instructional Objectives

APPLICATION

6. APPLIES PREVIOUSLY LEARNED SKILLS OR GENERALIZATIONS TO NEW SITUATIONS AND PROBLEMS

- a) Identifies and/or restates a problem to determine skills or generalizations necessary to its solution
- b) Selects skills or generalizations applicable to a problem
- c) Uses appropriate skills or generalizations
 - (1) To solve a problem
 - (2) To explain new phenomena
 - (3) To determine a course of action
 - (4) To justify a decision
- d) States the reasoning used in applying a particular skill or generalization in a given problem situation
 - (1) States relevancy of the skill or generalization
 - (2) States limitations of the skill or generalization

**Suggested
Instructional Level**

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
	*	*
		*
		*
		*
		*
		*

Instructional Objectives

ANALYSIS

7. ANALYZES ORGANIZATIONAL PATTERN OF A COMMUNICATION (PICTURE, PARAGRAPH, CHAPTER, BOOK, STORY, POEM, REPORT, OR ARTICLE)

a) Analyzes simple narratives or works of literature

- (1) Traces development of a character (or characters)
- (2) Traces development of a plot
- (3) Identifies elements of a particular literary form (comedy, tragedy, romance or adventure, lyric, satire, or hero epic)
- (4) Identifies characteristics of the particular genre (short story, biography, folk tale, poem, novel, play)
- (5) Identifies and explains point of view, tone, or mood
- (6) Relates content, form, genre, plot, setting, characterization, mood, and/or language to author's purpose
- (7) Explains elements that combine to determine author's style
- (8) Explains the set of values implicit in the material

b) Describes techniques used to influence thought and behavior (including propaganda techniques)

c) Traces development of main and supporting ideas

d) Analyzes logic in method of reaching conclusions or generalizations

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*
	*	*
		*
		*

Instructional Objectives

SYNTHESIS

8. *SYNTHESIZES, INTO A NEW FORM OF EXPRESSION, IDEAS SELECTED FROM COMMUNICATIONS*

- a) Combines ideas of others with own ideas
 - (1) To please self and/or others (expression for its own sake)
 - (2) To give information
 - (3) To communicate an opinion or point of view
 - (4) To achieve an effect or response in an audience
 - (a) To persuade to accept an idea or opinion
 - (b) To motivate to carry out a course of action
 - (c) To change attitudes or beliefs
 - (d) To create a mood or feeling
- b) Formulates appropriate hypotheses from analysis of a problem
- c) Proposes ways of testing hypotheses
- d) Integrates the results of an investigation into a solution of a problem

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
	*	*
		*
		*
		*
		*
		*
		*

Instructional Objectives

EVALUATION

9. EVALUATES COMMUNICATIONS

Suggested Instructional Level

- | | K-3 | 4-6 | 7-12 |
|--|-----|-----|------|
| a) Articulates own subjective values, opinions, or purposes and uses them as criteria for making judgments | * | * | * |
| b) Uses established standards as criteria for making judgments | | | |
| (1) Uses criterion of accuracy | * | * | * |
| (2) Uses criterion of consistency | | * | * |
| (3) Uses criterion of adequacy of data | | * | * |
| (4) Uses criterion of clarity | | * | * |
| (5) Uses criterion of relevancy (suitable? appropriate? timely?) | | * | * |
| (6) Uses criterion of validity (justifiable? sound? supported by objective truth?) | | | * |
| c) Uses standards of appropriateness and effectiveness for judging literature | | | |
| (1) Evaluates use of a particular form or genre | | | * |
| (2) Evaluates plot structure, development, or resolution | | | * |
| (3) Evaluates setting | | | * |
| (4) Evaluates character delineation, motivation, or development | | | * |
| (5) Evaluates point of view or tone (mood) | | | * |
| (6) Evaluates author's style | | | * |
| (7) Evaluates literary language and/or illustrations | | * | * |
| d) Evaluates effectiveness of communications used to influence opinion | | | |
| (1) Judges effectiveness of advertising techniques | | | * |
| (2) Judges effectiveness of editorial techniques | | | * |
| (3) Judges effectiveness of political techniques | | | * |
| e) Independently establishes objective criteria for evaluating ideas and uses them | | | * |

Examples of going from the (1) Major Goal to (2) Instructional Objective to (3) Performance Objective* to (4) Assessment Measure*

MAJOR GOAL	INSTRUCTIONAL OBJECTIVE	PERFORMANCE OBJECTIVE	ASSESSMENT MEASURE	APPROX. GRADE LEVEL
The student will — Translate a communication into a different form 	The student will be able to — 3. a) (3) Construct a map from verbal information 	The student will — Construct a map of Alaska on which information about ways of making a living may be indicated by symbols, color, or shading 	The student will — Construct a map from verbal information about own community indicating ways of making a living and so indicating by symbols, color, or shading 	5
Interpret major ideas and relationships between ideas 	4. a) (3) and (4) Identify possibility or impossibility 	Answer yes or no to sentences to indicate whether the content of given statements is possible or not (See page for sample.) 	Create own statements — some of which are absurd, impossible, or incongruous — and question peers as to the possibility or impossibility of the statement 	K-3
Make predictions from data 	5. d) Predict extension or expansion of trends presented in verbal or diagrammatic form 	Examine trends of school enrollment in eight selected high schools. Using the data provided, predict enrollment trends of other high schools. (See page for sample.) 	Using the same information, predict development of new communities and school construction 	7-12

*Definitions from MCPS *Evaluating and Reporting Student Progress*, revised June 12, 1973.

A PERFORMANCE OBJECTIVE is a specific statement of what the student should be able to do.

An ASSESSMENT MEASURE is an indicator which is used to provide evidence of the attainment of instructional performance objectives.

Comprehension Continuum

LITERAL

- 2. Location / Recall
- 3. Translation

CRITICAL

- 4. Interpretation
- 5. Prediction
- 6. Application
- 7. Analysis

CREATIVE

- 8. Synthesis
- 9. Evaluation

1. Word Meanings

Together, the 9 big areas of Comprehension represent a continuum of thinking and meaning.

COMPREHENSION IS THINKING.

COMPREHENSION IS LANGUAGE.

COMPREHENSION IS REMEMBERING.

COMPREHENSION IS MEANING.

COMPREHENSION IS EXPERIENCING.

COMPREHENSION IS INTERACTING.

COMPREHENSION IS DOING.

COMPREHENSION IS TELLING.

COMPREHENSION IS ASKING.

COMPREHENSION IS SHOWING.

COMPREHENSION IS PERCEIVING.

COMPREHENSION IS KNOWING AND FEELING.

*Critical thinking is a process of comparative inquiry through which a confused, indeterminate problem is clarified and unified.

*Creative thinking is the product of something new, unique, and not-before-existent. It is uncertain and may appear in any field of human endeavor. It involves the recognition of hidden and remote relationships and the formulation of new hypotheses.

MCPS Bulletin No. 215, Curriculum Design, p. 105.

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Each of the 9 categories is related to all the other categories—comprehension being a total experience rather than a piecemeal activity. The thought processes involved cannot be separated from each other into distinct parts. Nonetheless, comprehension has been broken down into 9 general categories, even though these categories overlap, interweave, and are resistant to firm boundaries of definition or application.

The 9 categories—defined, described, and illustrated—enable teachers in any one school to communicate with each other about individuals—their students—using a common and comprehensible language. Lloyd W. Kline states it simply: "At least when we talk, let's be sure we all know what we're talking about—not just whether or not what is said makes sense, but first of all whether or not it says anything at all and roughly the same thing to everyone in the conversation."²

The 9 categories are an instructional device—a means by which the teacher can be precise and can articulate the ingredients and complexities of the thought processes which go into

comprehending
understanding
grasping
knowing.

WHY THIS MODEL?

SCOPE OF THE MCPS COMPREHENSION MODEL

The MCPS Comprehension Model is sufficiently specific to offer instructional direction, yet sufficiently broad to include various theories of comprehension and varied classroom approaches to it.

The model approaches reading and reading comprehension broadly, basing its philosophy on reading as a process of obtaining meaning from print and nonprint (as prescribed in the State of Maryland Reading Goals) and concurring with Edward Thorndike that "to read means to think."³ Thorndike's comprehension theory, written more than fifty years ago, precipitated much of the current literature which treats reading as a thinking process and which asserts that comprehension is inseparable from reading.

Theories of Comprehension

In any survey of the literature on reading comprehension, it becomes apparent that this is an area of contradiction and confusion. An inspection of various reading texts and articles reveals that there are almost as many lists of "comprehension" or "critical reading" abilities as there are reading experts. The lists differ both in the particular skills included and in the order in which they are listed. Some are placed in a hierarchy from less to more difficult or more complex tasks; in others no such hierarchy is discernible. The lists also vary in specificity. Some are stated in the most general terms; others are set forth in outlines subdivided into quite specific behaviors.

One reality which arises in the consideration of reading comprehension is that many of the behaviors usually cited are not and cannot be limited to reading situations and therefore are not reading behaviors *per se*. They may be practiced by preschool children in oral language situations or by adults in primitive cultures where reading is unknown. If one designates them as "language behaviors," however, new conflicts become evident. Speculation on the relation of language to thinking ranges from the opinion that language shapes our thought to the opinion that language is not necessarily involved in thinking. Benjamin Whorf, for example, has expressed the view that the way in which one thinks is in part conditioned by the way one's language structure *enables* one to think and that, consequently, different languages induce different ways of responding to the world of experience. "The background linguistic system (in other words, the grammar) of each language is not merely a reproducing instrument for voicing ideas but rather is itself the shaper of ideas."⁴

At the other end of the spectrum is the view of James Moffet, concerning such activities as relating facts, making inferences, drawing conclusions, interpreting, and predicting, which "occur in many areas of human experiences" and which have been "tucked under the skirts of reading." These, he says, are "... all mental operations that go on in the head of a non-literate aborigine navigating his outrigger according to cues from weather, sea life, currents, and the position of heavenly bodies. Not only do these kinds of thinking have no necessary connection with reading, but they have no necessary connection with language whatever."⁵

A second factor which makes difficult the definition and evaluation of the tasks of reading comprehension is the dearth of educational research on the subject. Compared with the number of studies concerned with the phonic or recoding skills, the number of studies concerned with advanced decoding or comprehension skills is small. It is not surprising, then, that Jeanne Chall, after surveying developments in "reading at the higher levels," concluded that "... reading comprehension has so far remained a mystery."⁶

APPROACHES TO COMPREHENSION

Bloom's *Taxonomy*

Our purpose here is not to try to describe various arguments in detail about language, reading, and comprehension nor to resolve them, but rather to find a practical framework within which teachers can operate in planning and implementing instruction designed to develop increasing skill in reading and utilizing what is read. For this purpose, the instructional objectives in this guide have been classified according to the scheme presented in Benjamin Bloom's *Taxonomy of Educational Objectives*.⁷ * Bloom's *Taxonomy* begins with the category of Knowledge, as the lowest level, and then classifies cognitive behaviors into five categories above Knowledge: Comprehension, Application, Analysis, Synthesis, and Evaluation. The category of Comprehension is subdivided into Translation, Interpretation, and Extrapolation. Each behavior includes elements of those previously described, and illustrative behaviors are given for each category. The *Taxonomy* also gives illustrative evaluation tasks for each type of behavior.

*A taxonomy is a system of classification in which the classes are sequential rather than arbitrary. The taxonomy serves the purpose of understanding the organization and the interrelation of the parts.

Bloom's *Taxonomy* appears to present a useful scheme for several reasons. An inspection of the classification system suggests that all of the cognitive behaviors (as distinguished from the behaviors in the affective domain and the psychomotor domain) that are involved in various reading situations may be fitted into the taxonomy at some point. Although many of the illustrative behaviors given in the *Taxonomy* do not relate exclusively to reading (and some not at all), there are many that can be related to reading in some way. The increasing complexity of the behaviors listed in the *Taxonomy* would appear to afford a useful hierarchy for teachers in planning instructional sequences. Finally, the illustrative evaluation tasks given in the *Taxonomy* should also prove useful in suggesting kinds of tasks for evaluating acquisition of the objectives listed in this bulletin.

Because the term comprehension means different things to different people, and because it is a factor in most of the skills previously listed in MCPS Bulletin No. 246⁸ (such as using structural clues for word recognition and using context clues and grammatical clues to word and sentence meaning), Comprehension, although used as a category by Bloom, is omitted as a category in this MCPS bulletin. The three subcategories of "Translation," "Interpretation," and "Extrapolation" have been raised to the status of main categories. The title "Prediction" is substituted for "Extrapolation."

The cross-reference chart on page diagrams the above discussion, relating the classification system of the MCPS Comprehension Model in this bulletin with that of Bloom's *Taxonomy*.

The Skills Approach

Probably the most familiar technique of handling comprehension is through the Skills Approach. This approach is utilized by numerous reading researchers whose lists of comprehension skills may vary from ten to one hundred ten or even more. Those skills which are most familiar to teachers and which appear consistently in the literature mesh with the goals of this MCPS model. They are listed on pages 43-45, with a cross-reference key into the MCPS instructional objectives.

The Questions Approach: Students as Questioners

"Children must learn to ask questions."⁹

"One of our goals . . . should be to make students effective questioners."¹⁰

"Each Maryland student . . . should comprehend various reading materials. To accomplish this goal the student . . . uses his own experiences and knowledge about the content to ask a variety of questions and to find suitable answers to these questions."¹¹

Teachers may find the following resources helpful as they explore ways to stimulate and encourage student-initiated questions.

In *Developing Inquiry*,¹² Suchman names and describes four types of student-posed questions as a means to involve students in active learning:

1. verification — obtaining specific information
2. experimentation — manipulating information verbally

3. necessity — determining whether particular information is essential
4. synthesis — determining the validity of hypotheses

In *Teaching Reading As a Thinking Process*¹³, students as questioners are a vital aspect of the Directed Reading-Thinking Activity (see MCPS Bulletin No. 246, *Teaching Reading Skills*, p. 34). This ability of students to function as effective question-askers may be justified on the basis of the following assumptions which underlie the rationale of the D-R-T-A:

1. Children can think.
2. Children can act purposefully.
3. Children can examine.
4. Children can use their experiences and knowledge.
5. Children can weigh facts and make inferences.
6. Children can make judgments.
7. Children can become emotionally involved.
8. Children do have interests.
9. Children can learn.
10. Children can make generalizations.
11. Children can understand.¹⁴

In *Questioning Strategies and Techniques*¹⁵, Hunkins details questioning strategies for students as well as teachers. Sample questions illustrate Bloom's six categories¹⁶ and are appropriate for the elementary and secondary student. "Since effective questions and questioning strategies are integral parts of good teaching and learning, we as teachers need to plan our questions carefully."¹⁷ Hunkins includes descriptions of ways which the ideas of Bloom, Sanders,¹⁸ and Taba¹⁹ complement each other.

The Questions Approach: Teachers as Questioners

Teachers' questions are a basic way of stimulating student thinking and learning. Questions are one means of helping students reach desired outcomes in reading comprehension. THE ART OF QUESTIONING IS NOT SIMPLE. Teachers might consider a progression to develop skill in this ability:

- i. As a beginning, teachers may prefer to construct questions based on three or four broad levels of comprehension. The chart on page 46 illustrates the scheme of several well-known reading authorities: Nila Banton Smith²⁰, Robert M. Wilson,²¹ MaryAnne Hall,²¹ and Harold Herber.²² This chart includes levels of comprehension, a description of these levels, and the way the varied levels described by these authors mesh into the MCPS comprehension categories.

2. Guided practice in formulating and using questions is provided for teachers through a minicourse developed by the Far West Laboratory for Educational Research and Development. This minicourse is available on a limited loan basis from the Division of Career Programs, Department of Staff Development, as an in-service course. Those teachers who cannot participate in the minicourse would find the teacher's guide²³ for the course helpful. The guide details illustrative elementary classroom situations of question and answer sessions between teacher and student. Emphasis is placed on questions at the levels of Analysis, Synthesis, and Evaluation (MCPS categories 7, 8, and 9).
3. Secondary teachers should find *Questioning Strategies and Techniques* and *Higher Cognitive Questioning, Minicourse 9, Teachers Handbook* helpful as well as *Classroom Questions, What Kinds?*²⁴ This latter book:
 - is a guide for teachers in making and asking questions
 - is the result of the combined efforts of over 100 teachers
 - classifies questions in seven levels (see page 46 of this MCPS bulletin for a description of the seven levels with cross-reference to "The Big 9")
 - is designed to help teachers help students develop more diversified and effective thinking
 - describes a plan for helping students USE ideas in a stimulating classroom atmosphere of questioning
 - provides questions (and answers) at the end of each chapter to help teachers evaluate their progress in learning about questioning strategies
4. Questions to specifically illustrate each of the MCPS 9 comprehension categories are included on the Highlights pages of this bulletin.

Additional questions follow:

SAMPLE QUESTIONS FOR MCPS 9 COMPREHENSION CATEGORIES

1. WORD MEANINGS

What is meant by _____?

What does _____ mean?

What is another word for _____?

Define _____.

Explain what is meant by _____.

What is the origin of the word _____?

How does the meaning of _____ as it is used in _____ differ from its meaning in _____?

The phrases _____ and _____ mean practically the same thing, yet one group of words might make some people angry. Which one? Why?

What is the origin of the word _____?

What two Greek roots combine to form the word _____?

What word meanings do you need to know to solve this number story? (Mathematics)

2. LOCATION AND RECALL (of information)

Who did _____?

What did _____?

When did _____?

Why did _____? (if the reason is stated in the material)

How many _____?

What are _____?

What events led to _____?

What is said about _____?

What kind of person does the story say _____ was?

What did _____ do that got him/her into difficulty?

What words in the chapter heading tell you that _____? (Social Studies)

What sources would you use to plan a report about _____? (Social Studies)

3. TRANSLATION (of ideas)

What kind of picture could you make to illustrate _____?

What does this picture show?

How can you illustrate the meaning of _____? (Science)

In your own words, tell what the map/chart/etc. means. (Social Studies, Science, Mathematics)

Draw a map to show the different places that _____ went in this article/story/chapter.

How does the time line show that _____? (Social Studies)

Can we make up a play to tell this story? What should we show?

Read the directions carefully. Do exactly what they tell you.

Tell us in your own words what happened next (according to this paragraph/section/chapter).

How could we restate _____?

What number sentence can you write to solve this story problem? (Mathematics)

What does the writer mean by the phrase _____?

What figure of speech does the author use to create a picture of _____?

Summarize in a few sentences _____?

4. INTERPRETATION

What is the main idea of _____?

Where is the main idea stated in this paragraph?

What details in the paragraph support the idea that _____?

Why is _____ an appropriate title for this chapter? (Social Studies)

Could that really happen? Why or why not?

How is _____ like _____? How is it different?

Is _____ the same as _____? Why or why not?

Which three _____ are most alike in _____?

Compare _____ with _____ respect to (1) _____, (2) _____, and (3) _____.

How does _____ today resemble _____ long ago in the story/information/book titled _____?

What is the author telling us in the passage _____?

How can you tell from the writing whether _____ is a fact or opinion? (Social Studies)

What does _____'s behavior tell you about his/her character?

What conclusions can you draw from the information given in the graph on page _____?

What was the order of events that led to _____?

Why did _____ happen? Was there one cause or were there several causes?

Why did _____? (if the reason is not stated in the material)

Why did _____ HAVE to happen?

5. PREDICTION

Did you expect this to happen? Why or why not?

What do you think will happen next?

Did you think that _____'s team would lose? Why or why not?

What would happen if _____?

Would you expect the same result if _____? (Social Studies)

What will _____ and _____ probably lead to?

If _____ continues to _____, what is likely to happen?

What do you think _____ will be doing while _____?

The story (information given) tells us only that _____.

What do you think _____ really is doing?

If the line on this graph were to be extended, what would the figure for 1976 probably be?

Judging from the graph and from what you have read, do you think the line will go up or down in 1976?

6. APPLICATION

What does the problem ask you to find?

What information do we need to solve this problem?

What facts that we already know will help us?

What have you learned in other subjects that is related to _____? (Social Studies)

Where should we look for the kind of information we need?

What other facts would support the conclusion that _____? (Social Studies)

What skills that we have learned will help us in solving this problem?

What would be the most efficient and most interesting way of presenting our answers to this problem?

What exception can there be to the generalization that _____? (Social Studies)

7. ANALYSIS

Find evidence in the story for the statement that _____ has, by the end of the story, changed a great deal from the kind of person he/she was at the beginning.

What does _____ suggest about _____'s character?

Do you think _____ is a hero/heroine? Why or why not?

Where did the events of the plot really begin? What climax did they lead up to?

What are the details that support the generalization that _____?

What are the funny things that happened in this story?

How does this event add to the story?

What lines of the poem express the poet's feelings about _____?

How does the poet feel about _____?

What characteristics that we have found in other folktales are also found in this one?

What kinds of appeals do magazine advertisements and TV commercials make to get people to buy their products?

What is the author trying to prove? What evidence does he present?

What conclusion does he reach?

What would the author's point of view be with respect to _____?

How does the author reach the conclusion that _____?

8. SYNTHESIS

Pretend that you are a character in the story. Rewrite an episode from your point of view.

How would you behave if _____?

What would you suggest as another chapter to the book, using the same characters?

Pretend that you are an historical character. Write a diary about an historical event or episode.

Read what several authors/poets have said on a subject. Then write a story or poem indicating how you feel about it.

What other facts could you use to prove that _____? (Social Studies)

9. EVALUATION

Why did you like the story/poem/article/picture/book?

What do you think of _____ in this story? Do you approve of his/her actions? Would you have done what he/she did? Why or why not?

Do you agree with the author's viewpoint that _____? Why or why not?

In the story, John disliked dogs because he was once bitten by a dog. Is he right or wrong to feel this way? Give a reason for your answer.

Choose your favorite person that we have read about in the Revolutionary War period. Write a paragraph or several paragraphs about this person. Be sure to tell why he/she is your favorite.

On the basis of the evidence the author has presented, do you think his/her conclusion is justified? Why or why not?

How true are the claims in advertisements and commercials? Are they always related to the worth of the product? Look at several advertisements. What would make you buy the products or not buy them? Are they good advertisements from the standpoint of the advertiser? from the standpoint of the consumer?

STRUCTURE OF LANGUAGE

All languages have order, organization, and consistency. In other words, language has a structure. This structure means, for example, that sentences are not simply strings of words but words which are related to each other in very specific ways. These relationships are a major aspect of using and understanding language — that is **comprehension**. The organization works as a system to give the listener and the reader information. Specifics on structural aspects of English as related to reading and reading comprehension are included in MCPS Bulletin No. 246, *Teaching Reading Skills*, on pages 17 to 19, A-72 to A-86, and A-105 to A-137.

Cloze

- a technique based on the structure of language
- a means of teaching and testing comprehension
- a word deletion process, the reader supplying the missing words
- an individual's score used as a measure of his ability to comprehend the reading matter
- an individual's score used as a measure of readability (Does the material fit the student?)

Cloze is an instructional technique which is based on the structure of language. The term, Cloze, derives from the human need for closure — that is, a natural tendency each of us has to complete the incomplete. The Cloze procedure is simply to delete words from written material and then to ask the reader to supply the missing words. The reader's ability to supply the correct words (or in some cases, synonyms for the deletions) is an indication of his/her ability to read and to understand the material.

Wilson L. Taylor is generally credited with originating the Cloze procedure in the 1950's. Other researchers and educators have continued to work with Cloze as it relates to Comprehension, both as an instructional technique and as an assessment measure.

Cloze is suitable as a teaching device because completing the Cloze units helps the reader gain insights into the process of experimenting with language elements, recognizing the interrelationships of language, and using context. Consequently, Comprehension skills should improve. A few examples of using Cloze as a means of instruction follow:

1. Cloze can be combined with a Language Experience approach. Using the students' own writings or dictations, the teacher decides on which words shall be deleted. Students are then given opportunities to suggest ALL words that would make sense for the deletions. Their contributions should be discussed in relation to the context. Initially, only concrete nouns might be deleted. Pictures could then be used as visual clues to the missing words.
2. Cloze can be effective in helping to improve listening comprehension. As the teacher reads orally, students read along silently with the same material. The teacher pauses at each deletion (timing the pauses according to student ability) while the students insert their responses. Discussion should center on the appropriateness and the variety of possible responses.
3. The words selected for deletion in a Cloze exercise could vary according to the content of the reading matter. This might range from every fifth word in narrative material to every tenth word in factually saturated material. The word deletions might also hinge on the instructional objectives for that lesson. For example, only function words may be eliminated one time, adjectives might be missing in another lesson, while conceptual nouns would be deleted in a third session.
4. A planned system of instruction with Cloze exercises which gradually increase in level of difficulty could be accomplished through (a) gradually increasing the grammatical complexity — moving from simple sentences to more complex sentences; (b) moving gradually from the concrete to the abstract; or (c) beginning by providing students with two multiple-choice alternatives for each deletion and then later eliminating the multiple-choice aspect with students supplying the missing words.

FEEDBACK TO THE STUDENTS, DISCUSSION OF REASONS BEHIND THE STUDENTS' RESPONSES, AND REINFORCEMENT FOR STUDENTS' EFFORTS AND SUCCESSES ARE A NECESSARY PART OF INSTRUCTION USING THE CLOZE TECHNIQUE.

Procedures for Cloze

1. Select a passage from reading material that the pupil would use in the classroom.
2. Decide on the automatic count for deleting words from the passage.
 - a) This might be every 10th word (recommended because textual materials are fact laden).
 - b) It might be every 5th, 7th, or 8th word for narrative material.
3. The first and last sentences should be completely unmutated.

4. Do not leave out proper names or the first word of a sentence.
5. As a teaching device, the blanks can be as long as the deleted word. The length of the space offers a clue.
6. An additional clue may be given by providing the first letter of the deleted word in the blank space.
7. Discussion should follow a Cloze exercise to enable pupils to express reasons for their word choices.
8. For testing purposes, keep the blanks uniform in length.
9. Approximation of comprehension and readability levels (based on narrative material, blanks of standard length, exact word replaced — disregarding minor misspellings, no time limit):
 - a) Comprehension levels in an exercise of 50 deleted words (each 5th word deleted)

44% (or 22 words) correct = 75% comprehension
57% (or 29 words) correct = 90% comprehension
 - b) Readability levels in an exercise of 50 deleted words (each 5th word deleted)

44% correct = Instructional Level
57% correct = Independent Level

Note: See Bormuth^{25, 26} for detailed explanation of these percentages.

Sample Cloze Exercise:

This is a sample of the CLOZE procedure. Cloze is one way of teaching _____ testing comprehension.
1

A deeper understanding of _____ message in printed material can be _____ among
2 3
pupils since they are forced _____ read carefully, to use contextual clues, _____ to
4 5
become actively involved with what _____ are reading in order to correctly _____
6 7
the word that was removed from _____ materials. In making his word _____, the
8 9
pupil depends on prior knowledge, _____ understanding of the material, context clues,
10
_____ a knowledge of word usage.
11

Cloze _____ well with a student's comprehension of _____ selection. Cloze
12 13
exercises are simple to construct and use in the classroom.

ANSWERS

- | | |
|-------------|----------------|
| 1. and | 7. insert |
| 2. the | 8. the |
| 3. fostered | 9. insertions |
| 4. to | 10. general |
| 5. and | 11. and |
| 6. they | 12. correlates |
| 13. the | |

READING IS . . .

TOGETHER . . . THE 9 BIG AREAS OF COMPREHENSION INCORPORATE STATE AND COUNTY READING GOALS.

ESTABLISHING GOALS

The goals and philosophy in this comprehension document are consistent with the State of Maryland Reading Goals and with the Montgomery County Goals of Education.

State of Maryland Reading Goals²⁷

Each Maryland student who has achieved the objectives for reading established by the local school should:

1. UTILIZE A VARIETY OF READING MATERIALS

In this goal, a student identifies his own purposes for using reading materials, and from a wide variety of available materials, selects those which are suitable in level of difficulty and in content. Such materials include both print (e.g., books, newspapers, periodicals, vertical files, documents) and nonprint (e.g., films, records, transparencies, maps, globes, charts).

2. USE A WORD RECOGNITION SYSTEM

The achievement of this goal enables a student to perform two tasks which are basic to success in reading. First, he knows and can apply a system for recognizing unfamiliar words. Secondly, he can instantaneously and simultaneously pronounce words and determine their meaning in a particular context. Such a system includes the use of the necessary picture, context, structural, phonic, and authority (i.e., glossary, dictionary) clues.

3. COMPREHEND VARIOUS READING MATERIALS

To accomplish this goal, the student must think literally, critically, and creatively about the intent of the communication. Thus, the student must develop a method for using the pattern of thought in the message in order to understand the meaning and to draw inferences. In this process, he uses his own experiences and knowledge about the content to ask a variety of questions and to find suitable answers to these questions.

4. MEET THE READING DEMANDS FOR FUNCTIONING IN SOCIETY

This goal prepares the student to survive in society by helping him to cope with everyday reading experiences (i.e., following directions, locating references, gaining information, understanding forms, and attaining personal development). Since it establishes a minimal performance level for students, this goal is of prime importance.

5. SELECT READING AS A PERSONAL ACTIVITY

The essence of this goal is the student's personal enjoyment and appreciation of the reading process whereby he can and does read. The development of such a positive attitude must not be left to chance, but instead it must include the continuous building of reading interest, desire, and habit as an integral part of all reading instruction throughout the State.

MONTGOMERY COUNTY PUBLIC SCHOOLS READING GOALS*

1. To develop competence in the skills of written communication
2. To develop responsibility in reading thoughtfully, purposefully, critically, and appreciatively
3. To develop the skills necessary for reading with understanding
4. To develop greater personal enjoyment of and aesthetic taste in literature
5. To develop through reading an insight into interpreting the meaning of the experiences of others

The program's three components are the framework within which its objectives are realized. These components are:

1. Teaching the skills of reading
2. Developing comprehension and critical reading abilities
3. Fostering the enjoyment and understanding of literature

MONTGOMERY COUNTY ENGLISH LANGUAGE ARTS GOALS**

The goals of the English Language Arts program are to help students to:

1. Become aware of the values, skills, attitudes, understandings, and appreciations necessary to living effectively in a democratic society
2. Think clearly and honestly
3. Develop competence in the skills of oral and written communication
4. Develop personal responsibility in the use of language
5. Read thoughtfully — purposefully, analytically, and critically
6. Appreciate the literary heritage and the relation of literature to the other arts
7. Develop insight in interpreting human experience
8. Develop increasingly mature standards of personal enjoyment and aesthetic tastes
9. Understand the relationship of words to human behavior
10. Develop power in creative thought and expression

*Montgomery County Public Schools, *Program of Studies*, Vol. IV, MP-8.

**Montgomery County Public Schools, *Program of Studies*, Vol. IV, ELA 1-2.

11. Use intelligently the mass modes of communication
12. Listen intelligently, courteously, and critically
13. Develop effective habits of work and study
14. Develop intellectual curiosity

Reading Is For Varied Purposes

A Maryland State Department of Education pamphlet²⁸ suggests —

It's a revolution! A revolution in reading, that is. Down with the old attempt to assess achievement without considering individual needs or purposes for reading. Up with the new standard that deals with how and why each student reads . . .

The reading demands of society dictate the purposes for reading . . . However . . . the reader, as a person, and the reading conditions are two factors just as important as the purposes for reading.

Reading, as a tool of communication, serves each individual in unlimited ways and for multiple purposes. In the early stages, students learn to read and then read to learn. Wilson and Hall list four major purposes for reading: (1) reading for scholastic success, (2) reading for job success, (3) reading for continuing education, and (4) reading for pleasure.²⁹

At the advanced levels of reading, there appear to be four general kinds of reading material with which students and adults are principally concerned. The first kind provides "how to" information, and the reader becomes involved in following directions for various activities such as baking a cake or filling out an income tax return. Another kind of reading material is exemplified by newspapers and periodicals read on a daily, weekly, or monthly basis, to keep up with current affairs, informed opinion, and developments in areas of particular interest such as hobbies, sports, and entertainment. A third kind of reading material offers information in particular subject areas. Finally, there is literature read for relaxation, entertainment, to enjoy the beauty and power of language, and to gain insight into man's nature in relation to himself, to society, and to the universe. Student objectives for all four of these kinds of reading materials have been included in this bulletin.

Reading Is Literature

Those objectives pertaining to literature which are listed under *The Big 9* are drawn from the following MCPS curriculum documents:

English Language Arts Course of Study (Elementary Level), 1965, revised 1972

English Language Arts Course of Study (Secondary Level — Grades 7-9, 1966)

English Language Arts Course of Study (Secondary Level — Grades 10-12, 1966)

These guides spell out the behaviors in considerable detail, discuss the literary elements involved, and provide illustrative units at every grade level.

Reading Is Subject Area Content

Objectives which are desirable in subject areas such as science, mathematics, and social studies (but which are not necessarily reading behaviors) have been included with the thought that they often do take place in connection with reading activities. It is for the teachers in the various subject areas to determine which behaviors they foster or should try to foster through the use of reading activities.

When applicable, parts of various Montgomery County Public Schools curriculum guides or courses of study are cited to indicate the meshing of common goals between those publications and this Comprehension guide. The Learning Activities of this guide include selected portions from the following MCPS publications:

Bulletin No. 175, *Elementary Social Studies Curriculum, Illustrative Units*, Volume I, K-3, Revised 1971; Volume II, 4-6, Revised 1972.

Bulletin No. 199, *United States History and Government I*, Grade 9, 1966.

The Pre-Algebra Mathematics Strand, Level and Topic Numeration of Performance Objectives, Third Preliminary Edition, 1972.

Science in the Montgomery County Elementary Schools, 1973.

Work Oriented Curriculum Course of Study, Grade 9, 1969; Grade 10, 1963; Grade 11, 1965; Grade 12, 1965.

Reading Is Using Media Center Skills and Materials

A Media Research and Communication Skills – Suggested Scope and Sequence Chart* was designed as a planning guide for teachers and media specialists to provide learning opportunities in media research skills. Sample assessment measures are currently being developed by a media skills committee. These assessment measures will consist of various activities and exercises that will assist teachers and media specialists in determining whether or not the student shows competence in specified skills. Sample learning activities for students have been included in this comprehension bulletin. For example:

- | | |
|---------|---|
| 2.c)(1) | Uses title page and copyright information |
| 2.d) | Locates information in a dictionary |
| 2.h) | Locates information in a thesaurus |
| 2.i) | Locates information in an almanac |
| 2.p)(2) | Uses periodical or magazine index |

The teacher and the media specialist can jointly use the above described resources as well as other resources found in the media center to help students develop skill in each of the 9 comprehension categories.

* Available from Department of Educational Media and Technology, Washington Center.

**CROSS REFERENCE: THE SKILLS APPROACH
AND
MCPS COMPREHENSION MODEL**

Comprehension Skill	MCPS Category Number and Category Title	Instructional Objective	Instructional Objective may be located on page:
Analogy	4. Interpretation	4. b) (2) (b)	263
Cause and effect	4. Interpretation	4. b) (6)	264
Character development	4. Interpretation 7. Analysis	4. b) (5) 7. a) (1)	264 381
Classify	4. Interpretation	4. b) (2) (a)	263
Comparison	4. Interpretation	4. b) (2)	263
Conclusion	4. Interpretation	4. b) (3-4)	264
Details, Location of	2. Location/Recall	2. Entire category	135-136
Directions	3. Translation	3. b)	193
Dramatization	3. Translation	3. c) (1)	193
Fact or fantasy	4. Interpretation	4. a) (3-4)	263
Fact or opinion	4. Interpretation	4. a) (3) (5)	263
Figurative language	3. Translation	3. c) (3)	194
Functional reading			
Locating and using information in employment forms, sales agreements, warranties	2. Location/Recall	2. f)	136
Telephone directory	2. Location/Recall	2. i)	136
Following directions and/or cautions, as on labels of medicines and household products	3. Translation	3. b)	193
Completing forms and applications (as driver's license, income tax forms)	3. Translation	3. b) (4)	193

Cross Reference: The Skills Approach and MCPS Comprehension Model (continued)

Comprehension Skill	MCPS Category Number and Category Title	Instructional Objective	Instructional Objective may be located on page:
Generalization	4. Interpretation	4. b) (3-4)	264
Idiomatic language	3. Translation	3. c) (2)	193
Inference	4. Interpretation	4. b) (3-4)	264
Main idea	4. Interpretation	4. a) (1)	263
Main idea and supporting ideas	4. Interpretation	4. a) (2)	263
Main idea and supporting ideas	7. Analysis	7. c)	381
Map Skills (also skills involving use of graphs, diagrams, charts, and tables)	3. Translation	3. a) (3-6)	193
Opposites	4. Interpretation	4. b) (2)	263
Outline	4. Interpretation	4. a) (2)	263
Paraphrase	3. Translation	3. d) (1)	194
Prediction	5. Prediction	5. Entire category	337
Propaganda techniques	7. Analysis	7. b)	381
Purpose: Author's	4. Interpretation	4. a) (7)	263
	7. Analysis	7. a) (6)	381
Reality or fantasy	4. Interpretation	4. a) (3-4)	263
References (see Study Skills)			
Relevancy	4. Interpretation	4. a) (2)	263

Cross Reference: The Skills Approach and MCPS Comprehension Model (continued)

Comprehension Skill	MCPS Category Number and Category Title	Instructional Objective	Instructional Objective may be located on page:
Sequence	2. Location/Recall	2. a)	135
	4. Interpretation	4. b) (1)	263
Study skills			
Location of information in specified sources (example: dictionary, encyclopedia, atlas)	2. Location/Recall	See entire category.	135-136
Media research skills	2. Location/Recall	See Media Research and Communication Skills – Suggested Scope and Sequence Chart	135-136
Outlining	4. Interpretation	4. a) (2)	263
Summarizing	3. Translation	3. d) (3)	194
Synonyms & antonyms	1. Word Meanings	1. b)	67
Validity	4. Interpretation	4. a) (3-5)	263
Value judgments	4. Interpretation	4. b) (5)	264
	9. Evaluation	9. Entire category	425
Vocabulary development	1. Word meanings	1. Entire category	67

**CROSS REFERENCE: MCPS COMPREHENSION MODEL AND BLOOM:
SANDERS; SMITH; WILSON-HALL; HERBER**

MCPS THE BIG 9	Bloom ^{a)}	Sanders ^{b)}	Smith ^{c)}	Wilson-Hall ^{d)}	Herber ^{e)}
1. WORD MEANING	1.00 Knowledge 1.11 Knowledge of Terminology	1. Memory	1. Literal (direct, primary meaning)	1. Literal understanding (the ability to obtain a message accurately)	1. Literal (what the author said)
2. LOCATION/RECALL	1.00 Knowledge				
3. TRANSLATION	2.00 Comprehension 2.10 Translation				
4. INTERPRETATION	2.00 Comprehension 2.20 Interpretation	3. Interpretation	2. Interpretation (supplying meaning to complete the text)	2. Interpretation (the ability to relate the message to own experience)	2. Interpretation (what the author meant by what he said)
5. PREDICTION	2.00 Comprehension 2.30 Extrapolation	(not included by Sanders)	4. Creative (going beyond the text to gain insights, find answers to questions, or solve problems)	3. Problem-solving (using Literal Understanding and Interpretation either critically or creatively in an application situation)	3. Applied (transfer of knowledge and deepening of understanding) (i.e., to apply what the author said and meant)
6. APPLICATION	3.00 Application	4. Application			
7. ANALYSIS	4.00 Analysis	5. Analysis	3. Critical (reacting to the quality, accuracy, truthfulness of text)		
8. SYNTHESIS	5.00 Synthesis	6. Synthesis	4. Creative		
9. EVALUATION	6.00 Evaluation	7. Evaluation	3. Critical		

^{a)} Benjamin S. Bloom, ed., *Taxonomy of Educational Objectives* (New York: David McKay Company, Inc., 1956), pp. 201-207.

^{b)} Norris M. Sanders, *Classroom Questions: What Kinds?* (New York: Harper & Row, Inc., 1966), p. 3.

^{c)} Nile Banton Smith, "The Many Faces of Reading Comprehension," *The Reading Teacher*, 23:3, December, 1969, pp. 249-259.

^{d)} Robert M. Wilson and MaryAnne Hall, *Reading and the Elementary School Child* (New York: Van Nostrand Reinhold Company, 1972), pp. 172-175.

^{e)} Harold L. Herber, *Teaching Reading in Content Areas* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), pp. 62-63.

Date _____

Student _____

Teacher _____

Grade _____ Reading Level _____

1. WORD MEANINGS

	ORAL	READING
a) Identifies and uses words correctly		
b) Synonyms and antonyms		
c) Vocabulary in content areas		

2. LOCATION/RECALL: of information in

a) Picture, filmstrip, narrative . . .		
b) Newspaper		
c) Book parts (cover, contents . . .)		
d) Dictionary		
e) Encyclopedia		

3. TRANSLATION

a) Verbal to pictorial and vice versa		
b) Directions: into action or to product		
c) Verbal to verbal or kinesics (dramatizes . . .)		
d) Paraphrase, illustrate by example		

4. INTERPRETATION

a) (1) Main idea		
a) (2) Details or outline		
a) (3) Fact, reality, possibility		
a) (4) Fantasy, unreality, impossibility		
b) (1) Sequence		
b) (2) Comparison (classification, analogy)		
b) (3) Inference, conclusion		
b) (4) Locates proof of inference, conclusion		
b) (5) Locates example of value		
b) (6) Cause and effect		

5. PREDICTION

a) Outcome of narrative		
b) Consequences of events		
c) Action or reaction of character		

6. APPLICATION

a) Identifies/restates problem		
b) Selects skills, generalizations		
c) Uses appropriate skills, generalizations		

7. ANALYSIS: analyzes narrative for

a) (1) Character		
a) (2) Plot		
a) (3) Form (comedy, adventure)		
a) (4) Genre (poem, play)		

8. SYNTHESIS: original ideas

a) (1) To please self and/or others		
a) (2) To give information		

9. EVALUATION

a) Subjective		
b) Established criteria (objective)		

SUGGESTED CODING:

- ☐ Objective not introduced
☒ Objective begun
☒ Objective partially attained
☒ Objective attained with material on student's instructional level

Date _____

Student _____

Teacher _____

Grade _____ Reading Level _____

	ORAL	READING
1. WORD MEANINGS		
a) Identifies and uses words correctly		
b) Synonyms and antonyms		
c) Vocabulary in content areas		
d) Denotative and connotative meaning		
e) Clues to meaning from Greek and Latin		

2. LOCATION/RECALL: of information in		
a) Picture, filmstrip, narrative . . .		
b) Newspaper		
c) Book parts (cover, contents . . .)		
d) Dictionary		
e) Encyclopedia		
f) Functional reading		
g) Glossary		
h) Thesaurus		
i) Telephone directory		
j) TV guide, timetable		
k) Atlas		
l) Almanac		
m) Magazine, pamphlet, brochure		
n) Catalog, advertisement		
o) Concert, theater program		
p) Media center guides		

3. TRANSLATION		
a) Verbal to pictorial and vice versa		
b) Directions: into action or product		
c) Verbal to verbal or kinesics (dramatizes . . .)		
d) Paraphrase, illustrate, summarize		

4. INTERPRETATION		
a) (1) Main idea		
a) (2) Details or outline		
a) (3) Fact, reality, possibility		
a) (4) Fantasy, unreality, impossibility		
a) (5) Opinion		
a) (6) Values and value judgments		

	ORAL	READING
b) (1) Sequence		
b) (2) Comparison (classification, analogy)		
b) (3) Inference, conclusion		
b) (4) Locates proof of inference, conclusion		
b) (5) Locates example of value		
b) (6) Cause and effect		

5. PREDICTION		
a) Outcome of narrative		
b) Consequences of events		
c) Action or reaction of character		

6. APPLICATION		
a) Identifies/restates problem		
b) Selects skills, generalizations		
c) Uses appropriate skills, generalizations		

7. ANALYSIS: analyzes narrative for		
a) (1) Characters		
a) (2) Plot		
a) (3) Form (comedy, adventure)		
a) (4) Genre (poem, play)		
a) (5) Point of view, tone, mood		
a) (6) Author's purpose		
b) Influences on thought (ex: propaganda)		

8. SYNTHESIS: original ideas		
a) (1) To please self and/or others		
a) (2) To give information		
a) (3) To give opinion or viewpoint		

9. EVALUATION		
a) Subjective		
b) Established criteria (objective)		
c) (7) Literature: language/illustrations		

SUGGESTED CODING:



Objective not introduced

Objective begun

Objective partially attained

Objective attained with material on student's instructional level

Student _____

Date _____ Teacher _____ Grade _____

Date _____ Teacher _____ Grade _____ Reading Level _____

Date _____ Teacher _____ Grade _____ Reading Level _____

Date _____ Teacher _____ Grade _____ Reading Level _____

Oral Language Situation				Reading		
K	1	2	3	1	2	3

1. WORD MEANINGS

a) Uses correctly and identifies meanings of words						
(1) Identifies by name						
(2) Identifies by function						
(3) Identifies by description						
b) Supplies synonyms and antonyms of given words						
c) Uses vocabulary of specific subject matter fields						
(1) Identifies terms used in language arts						
(2) Identifies terms used in mathematics						
(3) Identifies terms used in social studies						
(4) Identifies terms used in science						
(5) Identifies terms used in business and commerce						

2. LOCATION/RECALL

a) Locates information in picture, filmstrip, narrative . . .						
b) Locates information in newspaper						
c) Uses parts of book as guide to content						
(1) Uses cover and title page						
(2) Uses table of contents						
d) Locates information in a dictionary						
(1) Uses illustrations as guides to word meanings						
(2) Uses entry words to locate word meanings, synonyms						
(a) Alphabetizes by first letter						
(b) Alphabetizes by second letter						
e) Locates information in an encyclopedia						

SUGGESTED CODING:

- ☐ Objective not introduced
- ☒ Objective begun
- ☒ Objective partially attained
- ☐ Objective attained with material on student's instructional level

COMPREHENSION – CRITICAL READING/THINKING SKILLS, K-3

Oral Language Situation				Reading		
K	1	2	3	1	2	3

3. TRANSLATION

a) Translates from verbal form to pictorial or diagrammatic form, and vice versa						
(1) Draws a picture from verbal information						
(2) Describes pictures, cartoons, comic strips						
(3) Constructs a map from verbal information						
(4) Explains symbols (e.g., map, traffic signs)						
(5) Constructs a graph, diagram, chart . . .						
(6) Explains information in graphs, diagrams . . .						
b) Translates directions into action or a product						
(1) Performs a task in response to directions						
(a) One step						
(b) More than one step						
(2) Prepares food from a recipe						
(3) Constructs an article from directions and/or pattern						
(4) Fills out forms (e.g., mail orders, applications . . .)						
c) Translates from verbal to verbal or kinesics (body language)						
(1) Dramatizes, role-plays, or pantomimes						
(2) Translates geographic and cultural dialect into personal dialect						
(3) Translates figurative language into literal language						
(a) Explains fable, proverb, or parable						
d) Translates from one level of abstraction to another						
(1) States in own words or paraphrases						
(2) Gives an example or illustration						

4. INTERPRETATION

a) Identifies ideas						
(1) Identifies main idea, theme, or issue						
(2) Identifies or OUTLINES ideas relevant to main idea						
(3) Identifies fact, reality, possibility						
(4) Identifies fantasy, unreality, impossibility						
b) Discovers relationships between ideas						
(1) Arranges ideas in logical or chronological sequence						
(2) Compares ideas for similarity, difference . . .						
(a) Classifies						
(b) Makes analogies						
(3) Draws inference, conclusion, or generalization						
(a) From pictorial evidence						
(b) From verbal evidence						
(4) Locates evidence to support inference, conclusion . . .						
(5) Locates or supplies examples of a given value						
(6) Relates cause and effect						
(a) Identifies reasonable cause						
(b) Supplies possible cause						

COMPREHENSION – CRITICAL READING/THINKING SKILLS, K-3

Oral Language Situation				Reading			
K	1	2	3	1	2	3	

5. PREDICTION

a) Predicts outcome of a narrative							
b) Predicts consequences of courses of action or events							
c) Predicts actions or reactions of a character							

6. APPLICATION

a) Identifies and/or restates problem to determine skills/generalizations							
b) Selects skills or generalizations applicable to problem							
c) Uses appropriate skills or generalizations							
(1) To solve a problem							

7. ANALYSIS

a) Analyzes narratives or works of literature							
(1) Traces development of a character or characters							
(2) Traces development of a plot							
(3) Identifies elements of particular literary form (comedy, tragedy ...)							
(4) Identifies characteristics of particular genre (poem, folk tale ...)							

8. SYNTHESIS

a) Combines ideas of others with own ideas							
(1) To please self and/or others							
(2) To give information							

9. EVALUATION

a) Articulates and uses subjective criteria to make judgments							
b) Uses established standards as criteria for making judgments							
(1) Uses criterion of accuracy							

Student _____

Date _____ Teacher _____ Grade _____ Reading Level _____

Date _____ Teacher _____ Grade _____ Reading Level _____

Date _____ Teacher _____ Grade _____ Reading Level _____

Oral Language Situation		
4	5	6

Reading		
4	5	6

1. WORD MEANINGS

a) Uses correctly and identifies meanings of words				
(1) Identifies by name				
(2) Identifies by function				
(3) Identifies by description				
b) Supplies synonyms and antonyms of given words				
c) Uses vocabulary of specific subject matter fields				
(1) Identifies terms used in language arts				
(2) Identifies terms used in mathematics				
(3) Identifies terms used in social studies				
(4) Identifies terms used in science				
(5) Identifies terms used in business and commerce				
d) Distinguishes denotative and connotative meanings				
e) Identifies Greek and Latin roots as clues to meaning				

2. LOCATION/RECALL

a) Locates information in pictures, filmstrip, narrative ...				
b) Locates information in newspaper				
c) Uses parts of book as guides to content				
(1) Uses cover, title page, and/or copyright information				
(2) Uses table of contents				
(3) Uses preface				
(4) Uses index				
d) Locates information in a dictionary				
(1) Uses illustration as guides to word meanings				
(2) Uses entry words to locate word meanings, synonyms				
(a) Alphabetizes by first letter				
(b) Alphabetizes by second letter				
(c) Alphabetizes by subsequent letter				
(3) Uses numbered definitions for different/precise meanings				
(4) Uses diacritical marks				
(5) Uses guide words				
e) Locates information in an encyclopedia				
f) Locates and uses information in functional reading				
g) Locates information in a glossary				
h) Locates information in a thesaurus				

SUGGESTED CODING:

- ☐ Objective not introduced
- ☒ Objective begun
- ☒ Objective partially attained
- ☐ Objective attained with material on student's instructional level

Oral Language Situation		
4	5	6

Reading		
4	5	6

2. LOCATION/RECALL (continued)

i) Locates information in a telephone directory		
j) Locates information in a TV guide or timetable		
k) Locates information in an atlas		
l) Locates information in an almanac		
m) Locates information in a magazine, pamphlet, brochure		
n) Locates information in a catalog or advertisement		
o) Locates information in a concert or theater program		
p) Uses media center guides		
(1) Uses card or book catalog		
(2) Uses periodical or magazine index		

[illegible]

3. TRANSLATION

a) Translates from verbal form to pictorial or diagrammatic form, and vice versa		
(1) Draws a picture from verbal information		
(2) Describes pictures, cartoons, comic strips		
(3) Constructs a map from verbal information		
(4) Explains symbols (e.g., map, traffic signs)		
(5) Constructs a graph, diagram, chart . . .		
(6) Explains information in graphs, diagrams . . .		
b) Translates directions into action or a product		
(1) Performs a task in response to directions		
(a) One step		
(b) More than one step		
(2) Prepares food from a recipe		
(3) Constructs an article from directions and/or pattern		
(4) Fills out forms (e.g., mail order, application)		
c) Translates from verbal to verbal or kinesics (body language)		
(1) Dramatizes, role-plays, or pantomimes		
(2) Translates geographic and cultural dialect into personal dialect		
(3) Translates figurative language into literal language		
(a) Explains fable, proverb, or parable		
(b) Explains figures of speech		
d) Translates from one level of abstraction to another		
(1) States in own words or paraphrases		
(2) Gives an example or illustration		
(3) Summarizes		

[illegible]

Oral Language Situation		
4	5	6

Reading		
4	5	6

a) Identifies ideas		
(1) Identifies main idea, theme, or issue		
(2) Identifies or outlines ideas relevant to main idea		
(3) Identifies fact, reality, possibility		
(4) Identifies fantasy, unreality, impossibility		
(5) Identifies opinions		
(6) Identifies values and value judgments		
b) Discovers relationships between ideas		
(1) Arranges ideas in logical or chronological sequence		
(2) Compares ideas for similarity, difference ...		
(a) Classifies		
(b) Makes analogies		
(c) Identifies degree of similarity or difference		
(d) Relates sets of ideas on specified points		
(3) Draws inference, conclusion, or generalization		
(a) From pictorial evidence		
(b) From verbal evidence		
(4) Locates evidence to support inference, conclusion ...		
(5) Locates or supplies examples of a given value		
(6) Relates cause and effect		
(a) Identifies reasonable cause		
(b) Supplies possible cause		
(c) Supplies multiple cause		

[illegible]

a) Predicts outcome of a narrative		
b) Predicts consequence of courses of action or events		
c) Predicts actions or reactions of a character		

a) Identifies and/or restates problem to determine skills or generalizations necessary to solution		
b) Selects skills or generalizations applicable to problem		
c) Uses appropriate skills or generalizations		
(1) To solve a problem		
(2) To explain new phenomena		

COMPREHENSION – CRITICAL READING/THINKING SKILLS, 4-6

Oral Language Situation		
4	5	6

Reading		
4	5	6

7. ANALYSIS

a) Analyzes narrative or works of literature			
(1) Traces development of a character of characters			
(2) Traces development of a plot			
(3) Identifies elements of a particular form (comedy, tragedy ...)			
(4) Identifies characteristics of particular genre (folk tale, poem ...)			
(5) Identifies/explains point of view, tone, mood			
(6) Relates content, language ... to author's purpose			
b) Describes influences on thought and behavior (example: propaganda)			

8. SYNTHESIS

a) Combines ideas of others with own ideas			
(1) To please self and/or others			
(2) To give information			
(3) To communicate an opinion or point of view			

9. EVALUATION

a) Articulates and uses subjective opinions ... to make judgments			
b) Uses established standards as criteria for making judgments			
(1) Uses criterion of accuracy			
(2) Uses criterion of consistency			
(3) Uses criterion of adequacy of data			
(4) Uses criterion of clarity			
(5) Uses criterion of relevancy (suitable? appropriate?)			
c) Uses standards of appropriateness and effectiveness for judging literature			
(1) Evaluates literary language and/or illustrations			

Date _____ Student _____

Teacher _____ Grade _____ Subject _____

Suggested Coding:

☐

Objective not introduced

☒

Objective partially attained

☒

Objective begun

☐

Objective attained with material
on student's instructional level

Discussion

Reading

WORD MEANINGS

1. Associate words with objects or ideas they represent

a) Uses correctly and identifies meanings of words

(1) Identifies by name

(2) Identifies by function

(3) Identifies by description

b) Supplies synonyms and antonyms of given words

c) Uses vocabulary of specific subject matter fields

(1) Identifies terms used in language arts

(2) Identifies terms used in mathematics

(3) Identifies terms used in social studies

(4) Identifies terms used in science

(5) Identifies terms used in business and commerce

d) Distinguishes denotative and connotative meanings

e) Identifies Greek and Latin roots as clues to meaning

f) Formulates definitions in terms of class and/or characteristics

g) Formulates operational definitions

LOCATION/RECALL

2. Locates and/or recalls specific information

a) Locates information in pictures, filmstrip, narrative, paragraph, chapter, ...

b) Locates information in newspaper

c) Uses parts of book as guides to content

(1) Uses cover, title page, and/or copyright information

(2) Uses table of contents

(3) Uses preface

(4) Uses index

(5) Uses organization of chapter as guide to content (title, boldface ...)

(6) Uses appendix and/or bibliography

d) Locates information in a dictionary

(1) Uses illustrations as guides to word meanings

(2) Uses entry words to locate word meanings, synonyms

(a) Alphabetizes by first letter

(b) Alphabetizes by second letter

(c) Alphabetizes by subsequent letters

(3) Uses numbered definitions for different/precise meanings

(4) Uses diacritical marks

(5) Uses guide words

(6) Uses cross references for additional information, synonyms ...)

(7) Uses special sections (Colleges and Universities, Foreign Terms ...)

(8) Uses Guide to Pronunciation, Abbreviations Used ...

	Discussion	Reading
LOCATION/RECALL (continued)		
e) Locates information in an encyclopedia		
f) Locates and uses information in functional reading (e.g., sales agreement . . .)		
g) Locates information in a glossary		
h) Locates information in a thesaurus		
i) Locates information in a telephone directory		
j) Locates information in a TV guide or timetable		
k) Locates information in an atlas		
l) Locates information in an almanac		
m) Locates information in a magazine, pamphlet, or brochure		
n) Locates information in a catalog or advertisement		
o) Locates information in a concert or theatre program		
p) Uses media center guides		
(1) Uses card or book catalog		
(2) Uses periodical or magazine index		
TRANSLATION		
3. Translates a communication into a different form, different language,		
a) Translates from verbal to pictorial or diagrammatic and vice versa		
(1) Draws a picture from verbal information		
(2) Describes pictures, cartoons, comic strips		
(3) Constructs a map from verbal information		
(4) Explains symbols (e.g., map, traffic signs)		
(5) Constructs a graph, diagram, chart . . .		
(6) Explains information in graphs, diagrams . . .		
b) Translates directions into action or a product		
(1) Performs a task in response to directions		
(a) One step		
(b) More than one step		
(2) Prepares food from a recipe		
(3) Constructs an article from directions and/or pattern		
(4) Fills out forms (e.g., mail orders, applications . . .)		
c) Translates from verbal to verbal or kinesics (body language)		
(1) Dramatizes, role-plays, or pantomimes		
(2) Translates literary, cultural . . . dialect into personal dialect		
(3) Translates figurative language into literal language		
(a) Explains fable, proverb, or parable		
(b) Explains figures of speech		
d) Translates from one level of abstraction to another		
(1) States in own words or paraphrases		
(2) Gives an example or illustration		
(3) Summarizes		
INTERPRETATION		
4. Interprets major ideas and relationships between ideas		
a) Identifies ideas		
(1) Identifies main idea, theme, or issue		
(2) Identifies and outlines ideas relevant to main idea, theme, or issue		
(3) Identifies fact, reality, possibility		
(4) Identifies fantasy, unreality, impossibility		
(5) Identifies opinions		
(6) Identifies values and value judgments		
(7) Identifies elements which contribute to development of literary plot		

	Discussion	Reading
INTERPRETATION (continued)		
(8) Identifies premises, hypotheses, evidence, conclusions ...		
b) Discovers relationships between ideas		
(1) Arranges ideas in logical and chronological sequence		
(2) Compares ideas for similarity, difference ...		
(a) Classifies		
(b) Makes analogies		
(c) Identifies degree of similarity or difference		
(d) Relates sets of ideas on specified points		
(e) Determines independently points for comparing sets of ideas		
(3) Draws inference, conclusion, or generalization		
(a) From pictorial evidence		
(b) From verbal evidence		
(c) From statistical evidence or diagrammatic form		
(4) Locates evidence to support inference, conclusion ...		
(5) Locates or supplies examples of a given value		
(6) Relates cause and effect		
(a) Identifies reasonable cause		
(b) Supplies possible cause		
(c) Supplies multiple causes		
(d) Recognizes reversibility of causes and effects within chain		

PREDICTION

5. Makes predictions from data

a) Predicts outcome of a narrative		
b) Predicts consequences of courses of action or events		
c) Predicts actions or reactions of a character		
d) Predicts extension or expansion of trends, tendencies ... (verbal or diagrammatic)		
e) Fills in (interpolates) data omitted		

APPLICATION

6. Applies previously learned skills or generalizations to new situations/problems

a) Identifies and/or restates problem to determine skills or generalizations necessary to solution		
b) Selects skills or generalizations applicable to problem		
c) Uses appropriate skills or generalizations		
(1) To solve a problem		
(2) To explain new phenomena		
(3) To determine a course of action		
(4) To justify a decision		
d) States the reasoning for applying particular skill/generalization		
(1) States relevancy of the skill or generalization		
(2) States limitations of the skill or generalization		

ANALYSIS

7. Analyzes organizational pattern of a communication (picture, paragraph, chapter, book, story, poem, report, or article)

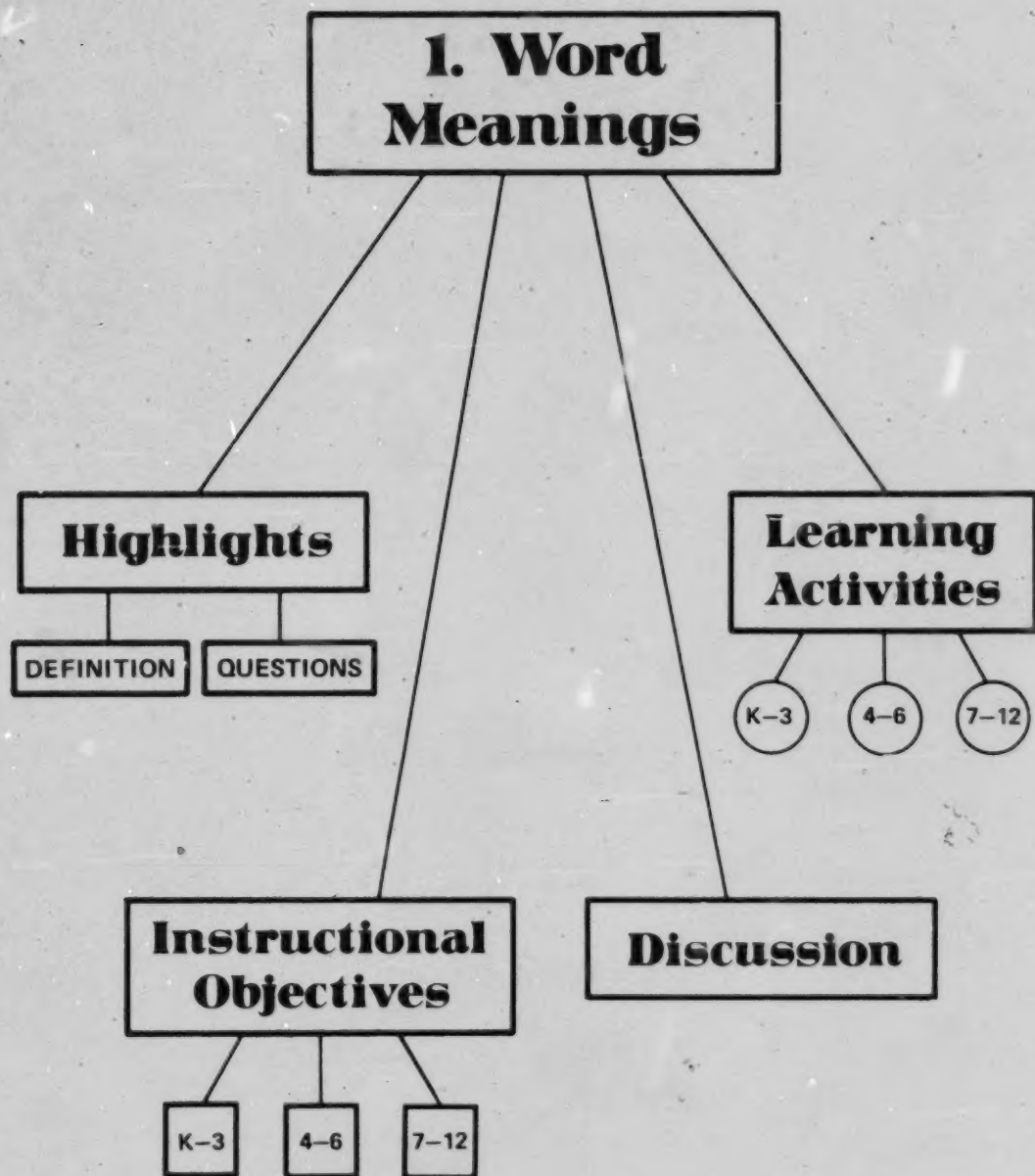
a) Analyzes narratives or works of literature		
(1) Traces development of a character (or characters)		
(2) Traces development of a plot		
(3) Identifies elements of a particular form (comedy, tragedy, lyric, satire ...)		
(4) Identifies characteristics of the particular genre (folk tale, poem ...)		
(5) Identifies and explains point of view, tone, or mood		
(6) Relates content, language, form, plot, mood ... to author's purpose		
(7) Explains elements that combine to make up author's style		
(8) Explains the set of values implicit in the material		

	Discussion	Reading
ANALYSIS (continued)		
b) Describes techniques used to influence thought/behavior (ex: propaganda techniques)		
c) Traces development of main and supporting ideas		
d) Analyzes logic of method of reaching conclusions or generalizations		
SYNTHESIS		
8. Synthesizes into a new form of expression ideas selected from communication		
a) Combines ideas of others with own ideas		
(1) To please self and/or others		
(2) To give information		
(3) To communicate an opinion or point of view		
(4) To achieve an effect or response to an audience		
(a) To persuade to accept an idea or opinion		
(b) To change attitudes or beliefs		
(c) To motivate to carry out a course of action		
(d) To create a mood or feeling		
b) Formulates appropriate hypotheses from analysis of a problem		
c) Proposes ways of testing hypotheses		
d) Integrates results of an investigation into solution of a problem		
EVALUATION		
9. Evaluates communications		
a) Articulates and uses subjective opinions, purposes, values to make judgments		
b) Uses established standards as criteria for making judgments		
(1) Uses criterion of accuracy		
(2) Uses criterion of consistency		
(3) Uses criterion of adequacy of data		
(4) Uses criterion of clarity		
(5) Uses criterion of relevancy (suitable? appropriate?)		
(6) Uses criterion of validity (justifiable? sound?)		
c) Uses standards of appropriateness/effectiveness for judging literature		
(1) Evaluates use of a particular form or genre		
(2) Evaluates plot structure, development, or resolution		
(3) Evaluates setting		
(4) Evaluates character delineation, motivation, or development		
(5) Evaluates point of view or tone (mood)		
(6) Evaluates author's style		
(7) Evaluates literary language and/or illustrations		
d) Evaluates effectiveness of communications used to influence opinion		
(1) Judges effectiveness of advertising techniques		
(2) Judges effectiveness of editorial techniques		
(3) Judges effectiveness of political techniques		
e) Independently establishes objective criteria for evaluating ideas and uses them		

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1. WORD MEANINGS
Highlights

1. ASSOCIATES WORDS WITH OBJECTS OR IDEAS THEY REPRESENT

- Identifying objects (name, describe, label)
- Personalizing word meanings
- Associating ideas with terminology
- Explaining shades of meaning
- Using a range of meaning
- Selecting meanings from context

What is a _____?

What does _____ mean?

What does _____ mean to you?

Describe _____.

Define _____.

How is _____ used here?

What meanings can you give for _____?

How is this meaning _____ related to
this _____ one?

Instructional Objectives

WORD MEANINGS

**Suggested
Instructional Level**

1. ASSOCIATES WORDS WITH OBJECTS OR IDEAS THEY REPRESENT

a)	Uses correctly and identifies the meanings of words used by family, peer group, and class	*	*	*
(1)	Identifies by name	*	*	*
(2)	Identifies by function	*	*	*
(3)	Identifies by description	*	*	*
b)	Supplies synonyms and antonyms of given words	*	*	*
c)	Uses vocabulary of specific subject matter fields			
(1)	Identifies terms used in language arts	*	*	*
(2)	Identifies terms used in mathematics	*	*	*
(3)	Identifies terms used in social studies	*	*	*
(4)	Identifies terms used in science	*	*	*
(5)	Identifies terms used in business and commerce	*	*	*
d)	Distinguishes denotative and connotative meanings		*	*
e)	Identifies Greek and Latin roots as clues to meaning		*	*
f)	Formulates definitions in terms of class and/or distinguishing characteristics where appropriate			*
g)	Formulates operational definitions where appropriate			*

1. WORD MEANINGS

Discussion

Word meanings form the base or foundation of comprehension.

Word meaning is essential to comprehension.

It is difficult – even impossible – to separate vocabulary from comprehension.

It is generally agreed that the depth and breadth of vocabulary development is the most important factor affecting the total process of comprehension.

Word meanings are personal.

- Individual experience, perception, and concept development cannot be separated from the response made to words.
- Words follow experience.
- Responses and meanings of children may be peculiar to them and may not be what the adult either expects or anticipates.
- Words represent aspects of the world as we view them.

Words . . .

are simply labels or symbols

stand for thoughts, not things

stand for concepts

may be concrete or abstract

may have multiple meanings

may change according to context

may change according to the times

help us talk about our discoveries

1. WORD MEANINGS

Discussion

Vocabulary development permeates the entire school program. The teacher provides an excellent model for growth and enthusiasm about words.

- Reading is an effective and rewarding vehicle for building vocabulary.
- Careful listening is indispensable to building vocabulary.
- Vocabulary development is a slow, maturing process.
- Vocabulary development is an endless manipulation of terms.

Building a larger and ever more useful vocabulary takes time, experience, and education. No matter how much effort is expended in intensive vocabulary study and no matter how many words we learn, there will always be a multitude of others we have never heard nor seen, others which have meanings different from those we associate with any given word, and others which are in our *emerging vocabulary*.

Word meanings extend into phrase, sentence, and paragraph meanings. Thus the environment or context of any given word may enhance, clarify, or change individual word meanings. Each extension builds onto the complexity of how words relate to each other and how they affect each other. In other words, the sum of the total is greater than the sum of the individual words. Structure words (e.g., however), figurative language (e.g., spin a yarn), and idiomatic language (e.g., big deal) are only a few examples of the ways meanings grow when words are put together.

Words are borrowed.

All languages borrow. The English language has borrowed freely from most of the languages of the world. Because the understanding of these other languages was incomplete at times, the English word may have little or no apparent tie with the foreign word on which it was based. These ties also lose their similarities as our English words change through usage and familiarity.

Resources for Teachers

The following books are illustrative of the many professional resources having concrete and useful information for teachers on basic understandings and teaching techniques for word meaning.

Some parts of each book have been abstracted. The books are available for loan from the Educational Materials Laboratory, Washington Center.

Reading and Learning Disabilities¹

Vocabulary can be categorized as:²

1. An understanding vocabulary

1. WORD MEANINGS

Discussion

2. A speaking vocabulary
3. A reading vocabulary
4. A writing vocabulary
5. An emerging vocabulary

[The emerging vocabulary includes words for which there is some faint familiarity or some degree of understanding but this understanding is not yet complete enough to allow those words to be incorporated into useful and used vocabulary.]

Three tasks in efficient and effective vocabulary development:³

1. To attach a new symbol to an old concept
2. To attach an old symbol to a new concept
3. To attach a new symbol to a new concept

Concepts and the words associated with each concept form the base from which meaning grows.⁴

1. How are concepts and word associations acquired?
 - a) Through experience — both concrete and vicarious
 - b) Through the mental involvement of real experience (for “exposure is not necessarily experience”)
 - c) Through discussion and questioning which focus the student’s attention on the desired experience
2. How are concepts and word associations developed in the classroom?⁵
 - a) **The Incidental Approach:** a wide variety of experiences
 - b) **The Correlated Approach:** identification and instruction by the teacher of new concepts and new words which the student will meet in reading matter
 - c) **The Directed Practice Approach:** a program specifically directed to vocabulary development, divorced from the reading materials used by the student
 - d) **The Author Approach:** vocabulary development by varied techniques such as contextual synonyms (the *lucid* or *clear* explanation), parenthetical explanations, and footnotes

1. WORD MEANINGS

Discussion

*Improving the Teaching of Reading*⁶

Principles to guide the teacher in developing word meanings:

1. **Multiple Meanings:** "Generally, the more frequently a word is used, the more meanings it tends to have."⁷
2. **Contextual Effect:** specific word meaning is determined by --
 - a) Verbal context
 - b) Cultural context
 - c) Structural context
3. **Experiential Effect:** the number of meanings attached to any given word by any given student is dependent on --
 - a) Number of experiences associated with given word
 - b) Quality of experiences associated with word
4. **Sensory Effect:** meanings evolve through association with a sense of --
 - a) Touch (slippery, smooth . . .)
 - b) Taste (sour, salty . . .)
 - c) Sight (shiny, crooked . . .)
 - d) Smell (perfume, aroma . . .)
 - e) Sound (click, crash . . .)

Vocabulary improvement, fourteen specifics:⁸

1. Awareness and articulation
2. Systematic method
3. Vocabulary notebook
4. Gradual growth from common meanings to special meanings
5. Contextual study

1. WORD MEANINGS

Discussion

6. Mental pictures
7. Separation of word into basic elements
8. Root word associations with synonyms and antonyms
9. Homonym study
10. Use of new words in speech and writing
11. Interest in origin of words
12. Introduction to new words of the language
13. Fine shades of meaning
14. Technical vocabulary of specific subject matter

*Fusing Reading Skills and Content*⁹

This book offers practical and motivating ideas in such varied subject areas as home economics, French, typing, mathematics, physical education, art, social studies, music, English, biology, vocational education, and science.

Olive Niles¹⁰ notes that content teachers have a major responsibility in developing new concepts along with the symbols — both verbal and nonverbal — representing these concepts. The symbols or words may be generalized, useful in varied areas (e.g., approximation), or they may be highly specialized (e.g., parabola, H_2SO_4).

Individual articles in this book focus on specific subject areas suggesting ways by which teachers might incorporate concept development, vocabulary development, and reading skill development within the class session.

Sidney Rauch¹¹ suggests a number of activities for vocabulary improvement which include:

- Language books of many different types
- Clarification and illustration of key or directive words (enumerate, contrast, justify . . .)
- Emotion-arousing words and overworked adjectives and verbs
- Rewording well-known proverbs and quotations
- One-word characterizations of illustrations and photographs

1. WORD MEANINGS

Discussion

Teaching Reading in Content Areas^{1 2}

Harold Herber's book explains and illustrates the numerous Reading and Reasoning Guides which have been developed for the teacher's practical classroom use. Many of the guides cover technical vocabulary and language development. These guides are particularly appropriate for the secondary teacher. The content areas covered are labeled English, Social Studies, Mathematics, and Science. Herber notes that students need to build "word power" independently. While some students may require no vocabulary instruction, others might benefit from instruction in selected words, and still others would need more extensive discussion and instruction. The Reading and Reasoning Guides provide for this individualization.

Criteria which the teacher might use in selecting words for study would include (1) key concepts, (2) relative value, and (3) student's competence.

Consider two examples of Herber's exercises for students — one on the Literal Level and one on the Interpretive Level.

Literal Level

Word Puzzle: Social Studies^{1 3}

Directions: To solve this puzzle, look at the definitions below. Think of a word which fits the definition, has the same number of letters as the number of spaces provided in the corresponding line, and has the given letter in the same position as indicated. Write the word on the line. The first one is done for you.

- | | | | | | | | | | | | | |
|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1. | <u>I</u> | <u>N</u> | <u>D</u> | <u>E</u> | <u>P</u> | <u>E</u> | <u>N</u> | <u>D</u> | <u>E</u> | <u>N</u> | <u>C</u> | <u>E</u> |
| 2. | | — | E | — | — | — | — | — | — | — | | |
| 3. | | — | M | — | — | — | — | | | | | |
| 4. | | — | O | — | — | — | — | — | — | — | — | |
| 5. | — | — | C | — | — | — | — | — | | | | |
| 6. | | — | R | — | — | — | — | — | | | | |
| 7. | | — | A | — | — | — | — | | | | | |
| 8. | — | — | C | — | | | | | | | | |
| 9. | | — | Y | — | — | — | — | — | | | | |

1. WORD MEANINGS
Discussion

Definitions:

1. state of being free from outside control
2. country where citizens rule through elected representatives
3. people and territory controlled by one power
4. ruling body in a particular area
5. one who has absolute authority over others
6. state or quality of being free
7. to agree to approve idea
8. public security under law
9. government with absolute power invested in a single ruler

Note: This literal-level exercise provides definitions; and the number of letters in each word, along with a variation of clues provided by the placement of letters on the line to spell words, indicate similar letters in all words, and so forth.

Interpretive Level

Understanding Relationships: Mathematics¹⁴

Directions: Listed below are five words on each line. Draw lines under three in each row which have something in common. Under each row, write the word (words) expressing the relationship. Is there one set in each row?

1. numeral number name idea symbol

Group One: _____

Group Two: _____

2. prime composite finite infinite number

Group One: _____

Group Two: _____

1. WORD MEANINGS
Discussion

3. addition sum multiplication product subtraction

Group One: _____

Group Two: _____

4. base exponent factor number product

Group One: _____

Group Two: _____

5. universe subset intersection union null set

Group One: _____

Group Two: _____

Note: This exercise requires students to interpret meanings of words in relation to meanings of other words. This generalizing activity is at the interpretive level.

The Wonderful Words"¹⁵

Never let a thought shrivel and die

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

1. a) **USES CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS USED IN FAMILY, PEER GROUP, AND CLASSROOM**

1. **WORD MEANINGS**
Using Words Correctly
K-12

Interest in reading and a desire to read are worthwhile and life-long goals. However, suggestions for teachers (even from other teachers) on ways students may be motivated in reaching these goals are elusive and difficult to identify for a diverse student population.

"Activities of teaching and learning" which "can be both fun and growth-provoking"¹⁶ seem to be an appropriate way of introducing the Learning Activities section of this bulletin. The exercises which follow are from *Smuggling Language into the Teaching of Reading*. This paperback book includes many other techniques and procedures for teachers in helping students become critical readers.

DETECTING MALAPROPISMS¹⁷

Purpose: To teach critical reading, noting words that "do not fit"

Procedure:

1. Explain that people sometimes confuse words. They use one word when they really meant to use another. The words confused are often similar in sound or spelling.
2. Develop a series of sentences each of which contains a **malapropism** or word that has a different meaning than the intended word.

Teacher: "There is one word in each sentence that 'does not fit.' Underline this word. In the blank space following each sentence, write the word you think was intended."

1. May I have the vanilla folder? _____
2. Anna was absent because she had the chicken-pops. _____
3. At the museum we saw the Egyptian mommy. _____
4. The word big is a cinnamon for large. _____
5. Conversation experts fight forest fires. _____
6. She was proud of her long blonde trestles. _____
7. The government banned germ-welfare. _____
8. They made many New Year's revolutions. _____
9. John's father couched the baseball team. _____
10. Some people use lemon with tea and some use sugar. I prefer the ladder. _____

1. a) *USES CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS USED IN FAMILY, PEER GROUP, AND CLASSROOM*

1. **WORD MEANINGS**
Using Words Correctly
K-12

1. Hurry and distinguish the fire before it spreads. _____
 2. We watched the cowboys riding bulls at the radio. _____
 3. The cantelopes ran across the field. _____
 4. The word big is a cinnamon for large. _____
 5. Firemen get water from a fire hydrogen. _____
 6. The land along the river was very futile. _____
 7. She chose the lasso of two evils. _____
 8. "As you sow, so shall you also weep." _____
 9. The garbage scowl chugged up the river. _____
 10. In geome try we study squares, angels and circles. _____
-

1. The thick window shade did not omit the sunlight. _____
2. The doctor gave me a subscription to be filled at the drugstore. _____
3. The police comprehended the criminal after a long chase. _____
4. I hope the catsup I spilled won't strain the rug. _____
5. Children should inspect their parents' wishes. _____
6. That is a very good offer; you should expect it. _____
7. My big brother gave his girlfriend a diamond, and now they are enraged. _____
8. She sprained the linament in her leg. _____
9. Her condition approved at the hospital. _____
10. Riding the alligator is much faster than climbing the steps. _____

1. a) **USES WORDS CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS**

- (1) *Identifies by name*
- (2) *Identifies by function*
- (3) *Identifies by description*

1. **WORD MEANINGS**
Name, Function, Description
(Cooking Words)
K-6

Parents might be encouraged to consider this:

How many of these words and concepts have you used with your children in cooking experiences?

How and when do you use them?

What other words and concepts have you introduced?*

ACTION WORDS

combine	spread	squeeze	pour
scrape	stuff	peel	dissolve
beat	sprinkle	pit	cool
pop	butter	stem	measure
crack	skin	pare	warm
ice	sizzle	core	chill
whip	bubble	let rise	yields
refrigerate	stir	grease	drop
grate	heat	soften	bite
grind	sift	compress	cut
boil	chop	knead	chip
simmer	dice	half	add
bake	slice	quarter	melt
broil	strain	toast	press
divide	steam	roll	preheat
brown	freeze	shape	chew
cool	digest	sniff	smell
melt	mix	swallow	

INGREDIENTS

ginger	vanilla	evaporated milk
salt	rind	powdered milk
cinnamon	stem	sour milk
granulated sugar	leaves	whole milk
powdered sugar	stalk	skimmed milk

*These lists were developed by Sandra B. Horowitz, Parent Education Specialist, Department of Adult Education, Montgomery County Public Schools.

1. a) **USES WORDS CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS**

- (1) *Identifies by name*
 (2) *Identifies by function*
 (3) *Identifies by description*

INGREDIENTS (continued)

confectioner's sugar
 molasses
 shortening
 margarine
 butter
 eggs
 nuts
 nut meats
 coconut
 cheeses

gelatin
 oil
 flour
 skin
 baking powder
 baking soda
 yeast
 batter
 dough

homogenized milk
 pasteurized milk
 core
 peel
 seed
 pit
 fruit
 vegetables
 meats

TOOLS WE USE

mixing bowl
 cookie sheet
 pancake turner
 frying pan
 freezer
 scraper
 range
 refrigerator
 spatula

measuring cup
 measuring spoons
 skillet
 cookie cutter
 grater
 oven
 mixer
 hydrator

handle
 recipe
 paring knife
 serrated edge knife
 hot plate
 blender
 broiler
 egg beater

TEXTURE

mealy
 smooth
 tender
 crisp
 rough
 wet
 stiff

hard
 lumpy
 tough
 stringy
 dry
 compressed
 mushy

soft
 creamy
 firm
 crunchy
 moist
 granular

QUANTITY

degrees
 cupful
 a dash
 more
 package

pinch
 teaspoon
 a few
 less
 double

cup
 tablespoon
 some
 approximate
 half

1. a) **USES WORDS CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS**

- (1) *Identifies by name*
- (2) *Identifies by function*
- (3) *Identifies by description*

QUANTITY (continued)

quart
enough
ounce
pint
square (e.g., 3 squares
of chocolate)

whole
dozen
long
slice

both
pound
short
bunch

SHAPE

round
oblong

square

circle

TEMPERATURE

hot
warm
preheat

cold
degrees
boiling

cool
heat
chill

TIME

instant
minute
hour

overnight
gradually
a little while

next day
slowly

SIZE

large
tiny

small
huge

little
miniature

FLAVOR

tart
bitter
spicy

sweet
salty

sour
juicy

1. **WORD MEANINGS**
Name, Function, Description
(Cooking Words)
K-6

1. ASSOCIATES WORDS WITH OBJECTS
OR IDEAS THEY REPRESENT

1. WORD MEANINGS
K-6

The meanings of words are obviously an integral part of all literature. The examples which follow are selected from the Montgomery County Public Schools *English Language Arts Course of Study (Elementary)*, Bulletin 185. These examples illustrate application of a few of the objectives in the WORD MEANINGS section of this comprehension guide.

Objective

1. a) (3)
describes
meanings

p. K-2 *Emily Emerson's Moon* (Jean Merrill)

Reread parts of the story to illustrate effective vivid language such as:

"Lasso the moon right out of the sky."

"Scoop up the moon in a coffee cup."

p. K-4

Did the children understand the nature of a promise?

p. K-7 *The Biggest Bear* (Lynd Ward)

Did the children develop further . . . the concept of "little" and "big"?

1. a)
identifies
meanings

p. I-3 *Herman the Loser* (Russell Hoban)

What words have you met for the first time in this story? Let's discuss them.

1. a) (3)
describes
meanings

Did the children understand what Father meant when he called Herman a finder?

1. a)
uses
words

Did the children use the new vocabulary?

p. I-9 *Make Way for Ducklings* (Robert McCloskey)

1. c) (4)
uses science
vocabulary

There were some new words in this story. Let's talk about them and see what we learned about ducks from them. (molting, nesting, laying and hatching eggs, waddling, etc.)

1. a) (3)
describes
meanings

p. II-19 *The Blind Men and the Elephant* (a fable retold by Lillian Quigley)

Alert children to sense-appealing words (e.g., "touch" words)---

1. ASSOCIATES WORDS WITH OBJECTS
OR IDEAS THEY REPRESENT

1. WORD MEANINGS
K-6

in the story: smooth
round
sharp
tall
wide
thin

p. II-6 *The Cricket in Times Square* (George Selden)

How does the author describe city sounds?

Humming of rubber trees
Hooting of horns
Howling of brakes

How would you describe them?

Did the children choose words to express their experiences more effectively and precisely?

1. c) (1)
identifies
meanings

p. IV-6 *Ginger Pye* (Eleanor Estes)

Still another type of humor is derived from strange words, phrases, incongruities, or mispronunciation:

Boombernicks	skeleton houses
bubbah	"elegant" eyes
vilyun	intellectual dog
detestable	reasonable unreasonableness
tall short man	

p. IV-7

If one of the reasons given for liking the story is the way the author uses words, the teacher may have the students keep a list of some of the colorful phrases from the story. Two students might record such phrases as the story is read. The recorders could read from their lines at the end of every chapter, and the class could amend the lists. Later the information could be organized and put in chart form.

1. c) (3)
uses social
studies terms

p. V-16 *This Dear-Bought Land* (Jean Lee Latham) (for Grades 5-6)

Call attention to the author's use of the vocabulary of sailing as it occurs in context. Have a cumulative chart of these terms kept by one child in the class. Include such terms as:

Fo'c'sle--(fok'sl) the forecastle or the part of the ship forward of the foremast (p. 17)

slops--the ordinary sailor's shirt (p. 15)

bow--forepart of a vessel (p. 17)

**1. ASSOCIATES WORDS WITH OBJECTS
OR IDEAS THEY REPRESENT**

**1. WORD MEANINGS
4-6**

starboard—right side of the vessel (p. 17)

halyard—a tackle for raising or lowering a sail (p. 17)

(The above is a partial sampling of terms listed on page V-26.)

**1. a) USES CORRECTLY AND IDENTI-
FIES THE MEANINGS OF WORDS
USED IN FAMILY, PEER GROUP,
AND CLASSROOM**

**1. WORD MEANINGS
Using Words Correctly
K-3**

WORD BOX

Keep a small file box of new words encountered, with a picture illustrating the word, where appropriate. If possible, write a simple sentence using the word on the reverse side of the card.

"ONE-WORD-A-DAY" CLUB. Join the club and learn one new word a day from any source. Share the word in five different ways:

1. Write the word.
2. Divide it into syllables, showing diacritical marks.
3. Define the word in your own words.
4. Write an original sentence using the word.
5. State the word's part of speech.

DESCRIBING

Present a noun such as "cat," and ask the children to think of all the words that can describe it--such as "furry," "white," "black," "long-tailed," "playful," "green-eyed," "soft."

1. a) *USES CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS USED IN FAMILY, PEER GROUP, AND CLASSROOM*

1. **WORD MEANINGS**
Using Words Correctly
4-8

WORD OF THE DAY (Grades 4-8)¹⁸

Each day choose a person to present a "Word of the Day" for the next day. The person will put on the board a word, a key to its pronunciation, its part of speech, a definition, and a sentence containing that word.

The Word of the Day chairman can find this word in a book, magazine, or dictionary; then use a dictionary to locate the pronunciation, part of speech, and definition. He will compose the sentence himself.

All day long, everyone in the class will make effort to use the Word of the Day as much as possible in conversation.

VOCABULARY CHARTS¹⁹

Use a full sheet of ruled paper. Label it "Special Words," or "New Words," or any other appropriate title. Several of these charts may be worked on simultaneously, or a single chart incorporating all areas of study may be created. These charts should be placed where they are available so that students may add new words and also where the charts frequently come into view of the student.

Use the same general idea described above; but instead of making large charts for group use, have each student keep his own vocabulary list in a special notebook for personal study and review.

ODD-BALL²⁰

Write on the board groups of four words, three of which have related or similar meanings, and the fourth being opposite or totally unrelated. (Vary the difficulty of the vocabulary to suit the ability level of your group.) Find the word that does not belong with the others in each row, and circle it.

1. frigid	icy	tepid	numb
2. papaya	guava	quince	rutabaga
3. torrid	casual	sultry	steaming
4. gracious	timid	polite	courteous
5. abundance	dearth	famine	drought
6. repeat	echo	reiterate	declare
7. scant	sparse	scorn	scarce
8. compose	utter	vocalize	speak
9. defy	deft	resist	rebel
10. citadel	fortress	castle	hovel

Variation: Purposely select words not in the common vocabulary of your class, and have students use dictionaries to look up unknown words as they work the examples.

1. a) (2) IDENTIFIES BY FUNCTION
1. a) (3) IDENTIFIES BY DESCRIPTION

1. WORD MEANINGS
Function and Description
K-3

Draw five or more pictures (or cut the pictures from old books, magazines ...).

Number these pictures.

Write sentences under the pictures, one sentence to describe each picture.



A



B



C



D



E

1. It shines at night. _____
2. You write with this. _____
3. This will cut wood. _____
4. Dogs like to eat this. _____
5. This will cut paper. _____

1. a) USES CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS USED IN FAMILY, PEER GROUP, AND CLASSROOM ACTIVITIES

1. WORD MEANINGS
Using the Newspaper
4-6

1. c) USES THE VOCABULARY OF SPECIFIC SUBJECT MATTER FIELDS

The following excerpts from the guide *492 Ways to Use a Newspaper in the Elementary Classroom** are related to associating words with objects or ideas they represent:

*MCPS Bulletin No. 242, 1970.

1. a) *USES CORRECTLY AND IDENTIFIES THE MEANINGS OF WORDS USED IN FAMILY, PEER GROUP, AND CLASSROOM ACTIVITIES*

1. **WORD MEANINGS**
Using the Newspaper
4-6

1. c) *USES THE VOCABULARY OF SPECIFIC SUBJECT MATTER FIELDS*

1. a) Make a chart. Use two identical news items. Mount one entire item on a large piece of construction paper. From the identical item, clip the nouns and mount them on the paper. This may be done with other parts of speech and combined into a class booklet.
1. a) Build a Safety Word Book. While making First Aid books for vacation, the following words might be collected from the newspapers. Include their meanings in the Safety Word Book.

emergency
calamine lotion
suture

caution
danger
wound

heal
prevent

1. c) Dictionary Game: Choose two teams. Each classmate will be using the same page of the paper. The teams list five words from the paper. The teams vie with each other to see which one can find the appropriate meanings in the shortest time. Teams check each other's meanings.
1. c) Compile a list of words from the newspaper which are connected with a particular unit or a particular subject, such as:

topography
ravine
season
shale
lymph
fossils
masterpiece
invaluable
score

one-third as much
weighs less
double
rate of interest
exhibition
financing
design
compower
audition

electrocardiograph
artery
valves
orchestra
tranquilizers
reproduction
performance

1. a) (3) *IDENTIFIES BY DESCRIPTION*

1. **WORD MEANINGS**
Description
K-6

The sound of a word may be one form of description, giving a clue to the student about the word's meaning.

1. a) (3) IDENTIFIES BY DESCRIPTION

1. WORD MEANINGS

Description
K-6

Tell me what objects you think of when you hear the following words:

hum	groan	hoot	bark	whistle
chug	buzz	croak	honk	knock
chatter	chirp	whine	hiss	peep
thud	swish	drip	ping	ding-dong
whirr	cluck	clink	plop	ring
cheep	hiccup	gurgle	quack	puff
glug				

What does _____ make you think of?

Can you make a sound which would help us know that _____ means _____?

1. WORD MEANINGS

Description
K-12

A BINGO GAME

Use a list of words and definitions with which you are working in Social Studies, Science, or Mathematics . . .

Prepare Bingo cards, five in a row, five rows, using words from the list. Arrange each card differently. Leave the space in the middle FREE.

Leader reads MEANING from call card. (See list below.) Player covers word on card with marker. First to cover a row is winner.

Words for Bingo Cards

hut	cooperate
squirm	current
error	earth
arrange	distribute
flight	musician
astronaut	construct
confuse	herd
purpose	pronounce
total	superior
various	reverse
peak	temporary

Call Card List

very good	our planet
the very top	to say
a space pilot	to work together
to give out	to mix up
to place carefully	to build
to add up	many kinds
up-to-date	an air trip
a mistake	to wiggle
to turn about	for a short time
a small house	plays music
a group of animals	the reason

1. a) (3) IDENTIFIES BY DESCRIPTION

1. WORD MEANINGS

Anacrostics

5-12

ANACROSTICS

To solve an anacrostic, you must guess the words which are defined in the column headed Definition. When you think you have the right word, write it in the spaces beside the definition. Then, write each letter of the word in the same numbered square in the puzzle diagram. When the squares are all filled in, you will have completed a quotation. The black squares indicate the end of a word. If there is no black square at the end of the diagram, then the word carries over to the next line. Below is a sample puzzle.

DEFINITIONS

A. capital of Italy 3 40 1 14

F. went by air 22 13 24 28

B. a washing with water 18 8 11 5

G. to watch for or be ready for 6 31 16 19 34

C. cunning or tricky 38 23 4

H. collie in movies and TV 15 29 37 21 10 27

D. desert animal 26 36 17 35 9

I. polar bear's color 41 32 33 12 25

E. to support oneself in an erect position 30 20 2 39 7

A 1	E 2	A 3	C 4		B 5	G 6	E 7
	B 8		D 9	H 10	B 11	I 12	F 13
A 14		H 15	G 16	D 17	B 18		G 19
E 20	H 21		F 22	C 23	F 24	I 25	D 26
H 27		F 28	H 29	E 30		G 31	I 32
I 33	G 34	D 35		D 36	H 37		C 38
I 39	A 40	I 41					

1. b) SUPPLIED SYNONYMS OF GIVEN WORDS

1. WORD MEANINGS
Synonyms
K-6

How Many Ways to Say "Said"?

Have the students use any book containing dialogue that they are reading in class. Have a contest to see which person or team can find the most words that convey the meaning of the word "said," e.g., exclaimed, uttered, gasped, yelled, shouted . . .

Compile your own class thesaurus.

How Else Could You Say It?

Ask students to rewrite — in humorous language — phrases, sentences, or rhymes, using synonyms or definitions for the original words. (This might be a learning center activity for all grade levels.)

Example: Look at the birds in the sky.

Possible rewrite: Glance toward the flying creatures above the earth.

What Rhyme Is It?

Give the students the sentences rewritten in the above activity, and ask them to tell how more simply and sensibly the same idea may be expressed. Try it with nursery rhymes, for example:

Ancient ruler _____ was a happy individual. (Old King Cole)

_____ and _____ ascended the natural rounded elevation of land. (Jack and Jill)

There existed an ancient female person who had her domicile in the leather outer covering for the human foot. (The Old Woman Who Lived in a Shoe)

Synonyms: Using the Dictionary or Thesaurus

Many words listed as synonyms in a thesaurus are not identical in meaning. Try this: Make a list of synonyms from a dictionary or thesaurus and some examples of sentences into which these synonyms could fit. Try each one out in a sentence and help students become aware of the subtle changes in meaning of the sentence that sometimes result when a new word is substituted. Some new emotional overtones will be detected for example, if "discussed" is replaced by "argued," or "urged" by "nagged."

1. b) **SUPPLIES SYNONYMS OF GIVEN WORDS**

1. **WORD MEANINGS**
Synonyms
48

Context as a Clue to Synonym Meaning

Read each sentence, then circle the word(s) or phrase(s) in each sentence that provide clues to the underlined word.

1. At school the dormitory was my home away from home.
2. The pitcher looked bewildered because the trick play had him mixed-up.
3. Robby tried not to wince; but in spite of himself, he drew back quickly when the doctor treated the cut on his head.

Snap²¹

Make 13 sets of four cards each (52 cards in all). Each set shows four matching synonyms. Sample sets are:

1. buoyant, cheerful, happy, joyous
2. thin, slender, lean, narrow
3. castle, palace, mansion, alcazar
4. defy, disregard, resist, disobey
5. cash, money, funds, currency
6. menace, danger, threat, peril
7. priest, deacon, cleric, minister
8. mistake, inaccuracy, error, fault
9. neophyte, novice, beginner, greenhorn
10. witchcraft, sorcery, magic, voo-doo
11. truth, candor, honesty, verity
12. idol, image, statue, totem
13. parch, scorch, sere, dry

1. b) SUPPLIES SYNONYMS OF GIVEN WORDS

1. WORD MEANINGS
Synonyms
4-8

Two or more players may enjoy this free-time game. Deal all cards evenly among the players. Each player puts his cards face down in a stack in front of him.

Each player in turn takes his top card and turns it face up. If it is a synonym of a face-up card in any opponent's stack, either player may say, "Snap!"

The player who first says "Snap," gets all the cards in his opponent's face-up stack. He puts them at the bottom of his face-down stack, and the game continues.

The object is to take all the cards from your opponents. If the playing time ends before any player takes all the cards, the player holding the most cards (counting both the face-up and face-down stacks) is the winner.

1. WORD MEANINGS
Synonyms
6-8

Synonym Rummy²² (Grades 6-8)

Use the same set of cards as above. Two to four children may play. Deal six cards to each player. Place the remaining cards face down in the center of the table, and turn the top card face-up beside the stack.

The object is to collect sets of 3 or 4 synonyms.

Player 1 opens by drawing either the face-up card, or the top card from the stack. He arranges the cards in his hand by synonym sets, and discards one unwanted card, placing it on the face-up pile.

Player 2 may then draw either Player 1's discard, or the top card of the face-down stack, and so on.

Each time a player collects a set of 3 or 4 synonyms, he may place them face up on the table in front of him. If a player lays down a set of 3 cards, and any other holds the fourth card to that set, that other player may lay the card face up in front of him and it will count in his score.

The game ends when one player has laid down all the cards in his hand. Each player then counts the cards on the table in front of him, and the person with the most cards wins.

1. b) SUPPLIES ANTONYMS OF GIVEN WORDS

Opposites

Given one member of each of the following concept pairs, the student can name the opposite of each:

heavy	(light)
rough	(smooth)
hot	(cold)
big	(little)
long	(short)
fat	(thin)
fast	(slow)
loud	(soft)
up	(down)

Draw a line joining the opposites.

1. sad	crooked
2. little	girl
3. hot	fat
4. dark	light
5. slow	big
6. thin	happy
7. clear	cold
8. boy	fast
9. sweet	cloudy
10. straight	sour

1. b) SUPPLIES SYNONYMS AND ANTONYMS OF GIVEN WORDS

Double Match²³

Each Key Word in the first column can be matched with a Synonym in the second column as well as an Antonym in the third column.

Example:

KEY WORD

1. alien
2. retain

SYNONYM

- a) yield
- b) foreign

ANTONYM

1. native
2. green light

1. WORD MEANINGS
Antonyms
K-3

1. WORD MEANINGS
Synonyms and Antonyms
4-8

1. b) *SUPPLIES SYNONYMS AND
ANTONYMS OF GIVEN WORDS*

1. **WORD MEANINGS**
Synonyms and Antonyms
4-8

KEY WORD	SYNONYM	ANTONYM
3. cease	c) agree	3. initiate
4. calamity	d) hold	4. receive
5. forfeit	e) blame	5. release
6. caution	f) desist	6. object
7. squall	g) enrich	7. innocence
8. guilt	h) storm	8. deteriorate
9. improve	i) disaster	9. calm
10. consent	j) warning	10. good fortune

Opposites²⁴ (Grades 4-8)

Make a list of words and beside it make a list of opposites. (Adapt the vocabulary to the ability level of your group.)

Match the opposites (antonyms).

Example:

1. fatigued	a. disloyal
2. somber	b. upset
3. lenient	c. refreshed
4. faithful	d. insult
5. settle	e. plain
6. flatter	f. joyous
7. chronic	g. rare
8. rapid	h. repel
9. ornate	i. severe
10. attract	j. slow

VARIATION: List one column of words, and beside it a column of synonyms. Students may match synonyms in the same way described above.

1. c) *USES VOCABULARY OF SPECIFIC
SUBJECT MATTER FIELDS*

1. **WORD MEANINGS**
Subject Matter
7-12

Word Origins

Researching the origin of words might stimulate interest and result in improved recall of meanings.

1. c) *USES VOCABULARY OF SPECIFIC SUBJECT MATTER FIELDS*

A few examples:

vulcanize	(Vulcan)
macadam	(MacAdam)
volt	(Volta)
amp	(Andre M. Ampere)
watt	(James A. Watt)
pasteurize	(Pasteur)
poinsettia	(Joel R. Poinsett)
dahlia	(Anders Dahl)
mesmerize	(Mesmer)

1. c) *(1) IDENTIFIES TERMS USED IN LANGUAGE ARTS*

Primary students might be expected to be familiar with such terms as:

story	word
poem	phrase
play	sentence
fairytale	letter (referring to both correspondence and the alphabet)
make-believe	capital letter
fable	period
rhyme	question mark
rhythm	quotation mark
	comma

1. **WORD MEANINGS**
Subject Matter
7-12

1. **WORD MEANINGS**
Language Arts Terms
K-3

At the primary level, word meanings should be developed through discussion and class activities, rather than through written formal training in grammar and usage.

1. c) (1) IDENTIFIES TERMS USED IN
LANGUAGE ARTS

1. WORD MEANINGS
Language Arts Terms
48

There are some language arts terms with which students will become familiar at the upper elementary level. Some of these are:

plot	theme	setting
character	mood	myth
legend	simile	metaphor
noun	verb	figurative language
adjective	adverb	names of punctuation marks

It is not necessary that students be able to define these terms. It is, however, desirable that through discussion and exposure to these terms in classroom activities, students be able to recognize the essential nature of each term, understand how they differ from each other, and recognize examples.

Walter J. Moore and Larry D. Kennedy make the following point concerning the teaching of technical terminology to students.

"There is, of course, always a question about how much technical terminology should be employed when teaching young children; and there are no clear-cut answers . . . today's elementary school children are far better prepared to understand the technical nomenclature of a discipline than children were in past years."²⁵

The authors conclude that the value of teaching terminology is a matter of assessment by the individual teacher.

1. c) (2) IDENTIFIES TERMS USED IN
MATHEMATICS

1. WORD MEANINGS
Mathematics
4-6

Math Letter-Scramble

Find the math terms in the letter-scramble below and circle them. Then draw a line from the circled term to the definition that matches it. You may find the terms by reading up and down and back and forth.

an answer obtained
in subtraction.

to combine two numbers
to make a sum

to take away to get
a difference

to combine two
numbers to make
a product

to separate into
equal parts

part of a whole
number

an answer obtained
in addition

an answer obtained
in multiplying

an answer obtained
in division

a fraction in the
power of ten

a number to be
added to another

a sum

B E L G N A T C E R T
G R E I D O R K C T N
T J C D N U I F N N E
C A E U P E A R E E C
U N K D B Z N A R I R
D I V I D E G C E T E
O V E D T O L T F O P
R M A Q O U E I F U E
P O I N T R Q O I Q R
R O T C A F U N D U E
N T M U L T I P L Y H
O U Q L A M I C E D P
S S U B T R A C T J S

a number that when
multiplied forms a
product

a part of a hundred

a rectangle with
four sides equal

a series of continuous
points

a dot or single
place in space

a four-sided shape
with four right angles

a three-sided object

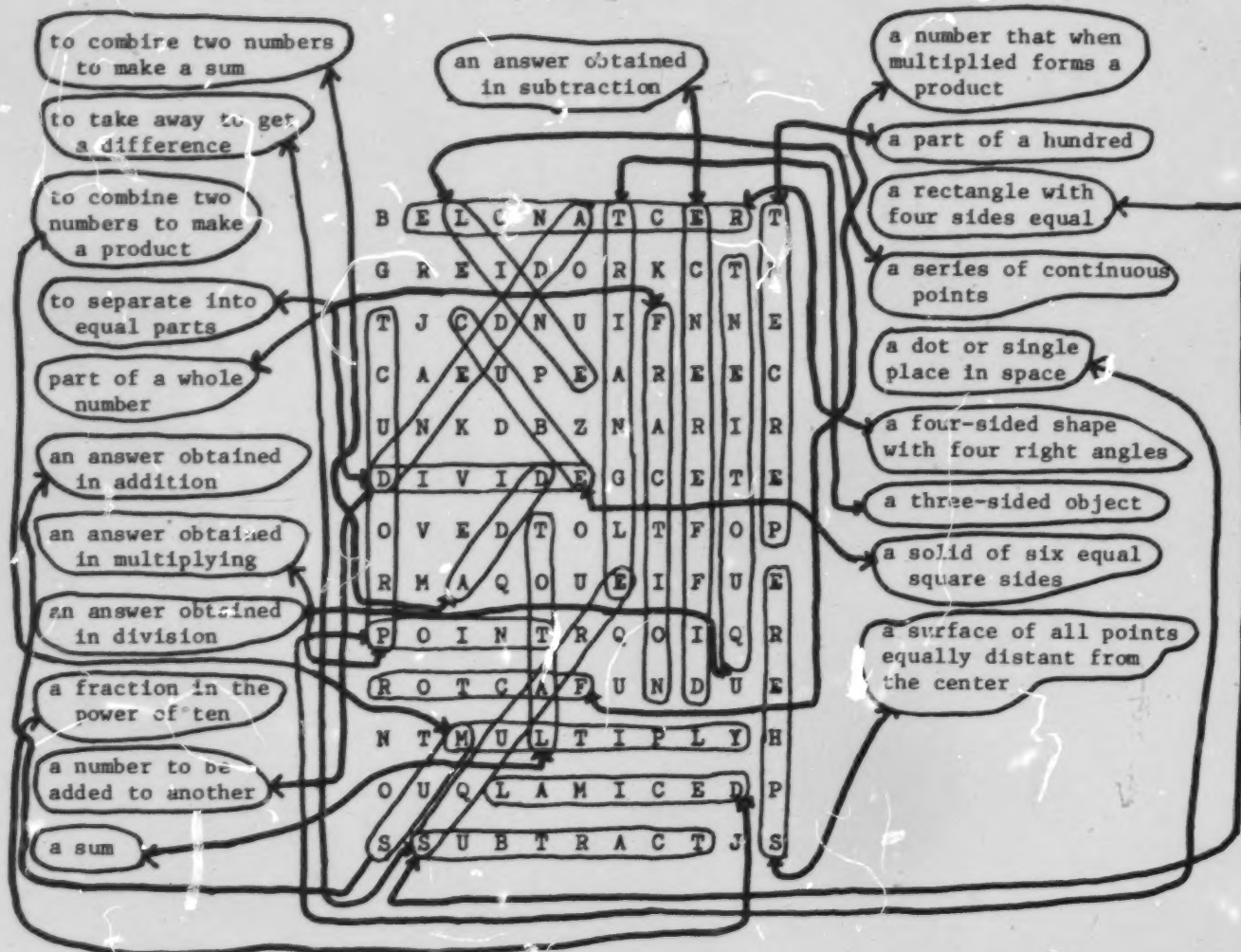
a solid of six equal
square sides

a surface of all points
equally distant from
the center

1. c) (2) IDENTIFIES TERMS USED IN MATHEMATICS

1. WORD MEANINGS
Mathematics
4-6

ANSWERS



1. c) (2) IDENTIFIES TERMS USED IN
MATHEMATICS

1. WORD MEANINGS
Mathematics Terms
5 up

Source: *The Pre-Algebra Mathematics Strand, Level, and Topic Enumeration of Performance Objectives*. Third Preliminary Edition, MCPS, 1972.

Level: K p. 55

Language and Symbolism:

1. Distinguishes among square, rectangle, rhombus, trapezoid, parallelogram p. 220
2. Identifies definitions of radius, diameter, circumference p. 222

Geometric Concepts and Measurement:

1. Identifies congruent line segments p. 219
2. Identifies congruent angles p. 219
3. Distinguishes between the properties of rectangles, squares, parallelograms, and trapezoids p. 221
4. Identifies congruent figures p. 219
5. Finds the radius of a given circle by using a compass p. 222
6. Applies the relationships between radius and diameter of a circle p. 222
7. Identifies a degree as $1/360$ of a complete rotation about a point p. 222
8. Distinguishes between geometric solids and plane figures p. 222-223
9. Identifies faces, edges, and vertices of a given geometric solid p. 223
10. Distinguishes between a rectangular prism and a cube p. 224

1. WORD MEANINGS
Mathematics Terms
7-12

The *Work Oriented Curriculum Course of Study, Grade 9, Phase 1* suggests that WOC students build a job-oriented and business math-oriented vocabulary, using both the oral and written forms of the words and their denotative and connotative meanings.

1. c) (3) IDENTIFIES TERMS USED IN
SOCIAL STUDIES

1. WORD MEANINGS
Social Studies Terms
K-6

Source: MCPS Elementary Social Studies Curriculum Illustrative Units.

Grade 1, "How a House Becomes a Home" (pp. 56-58)

- What is a shelter?
- Have the children name different kinds of shelters and describe them by playing "Tell Me Where I Live."
- Have each child demonstrate his ability to identify different kinds of shelter by constructing models or by drawing pictures.
- Tools: Have the children identify the various tools used by workers by making and labeling pictures and/or models.
- Recall information from which to construct lists to identify tools and their use.

Grade 2, "Many People Participate in Democratic Community Living" (p. 74)

- What is a public school?
- What is a Student Council?

Grade 3, "Living in Hot-Wet Regions: A Tropical African Village" (pp. 121-128)

How will the following terms and concepts be developed?

jungle	native	huts	continent	tributaries
dugout	village	tribal	missionaries	tourists
handicrafts	creative	artistic	hostile	superstitions
primitive	responsibilities	religion		

Grade 4, "Across the Ocean to the New Lands" (p. 8)

Make a picture dictionary of words and phrases (Spanish, Dutch, Indian) which have become a part of our language.

Grade 5, "Tropical Hawaii and Frontier Alaska: Lands of Contrast" (p. 91)

Begin a chart of geographical terms with pictures, photographs, or drawings to illustrate terms. Add terms as the study progresses.

Grade 6, "Feudalism Preserves Western Culture" (p. 133)

Begin a glossary of terms related to feudal life.

1. c) (3) IDENTIFIES TERMS USED IN
SOCIAL STUDIES

1. WORD MEANINGS
Social Studies Terms
4-8

In the drawing below are some boxes. Write in each one the correct number from the list below. In the space, write the meanings of these words. Then name an example for each, using a map of the world.



NAME _____ MEANING _____ EXAMPLE _____

1. Island		
2. Mountains		
3. River		
4. Lake		
5. Bay		
6. Cape		
7. Volcano		
8. Isthmus		
9. Delta		
10. Plains		

1. c) (3) IDENTIFIES TERMS USED IN
SOCIAL STUDIES

1. WORD MEANINGS
Social Studies
4-8

Social Studies Letter-Scramble

In the word game below, find words in the scramble of letters which would match the circled definitions surrounding the puzzle. Then, circle the hidden words in the puzzle and draw a line to the correct definition. You may find the words by reading up and down and back and forth.

the day the sun is
directly over the
equator

the line at 23-1/2° S. Lat.

longitude line

line at 66-1/2° N. Lat.

area around the equator

a point at 90° latitude

a hot zone

P A B E D U T I T A L
S R O Q T R E C N A C
E C T S O L S T I C E
R T I P V N A Z E Q N
E I I O R R R O U X V
R C A L C O K I M O I
E R A T I M T C C N R
H S I P P E R A N I O
P C A N R E Q U U U N
S O L S E I O U O Q M
I S K L K F C V A E E
M P O O P O P O R R N
E P F R F D I R R O T
H O M E R I D I A N O

a line that is parallel
with the equator

line at 23-1/2° N. Lat.

the day the sun's direct
ray is farthest from the
equator

your surroundings

line at 66-1/2° S. Lat.

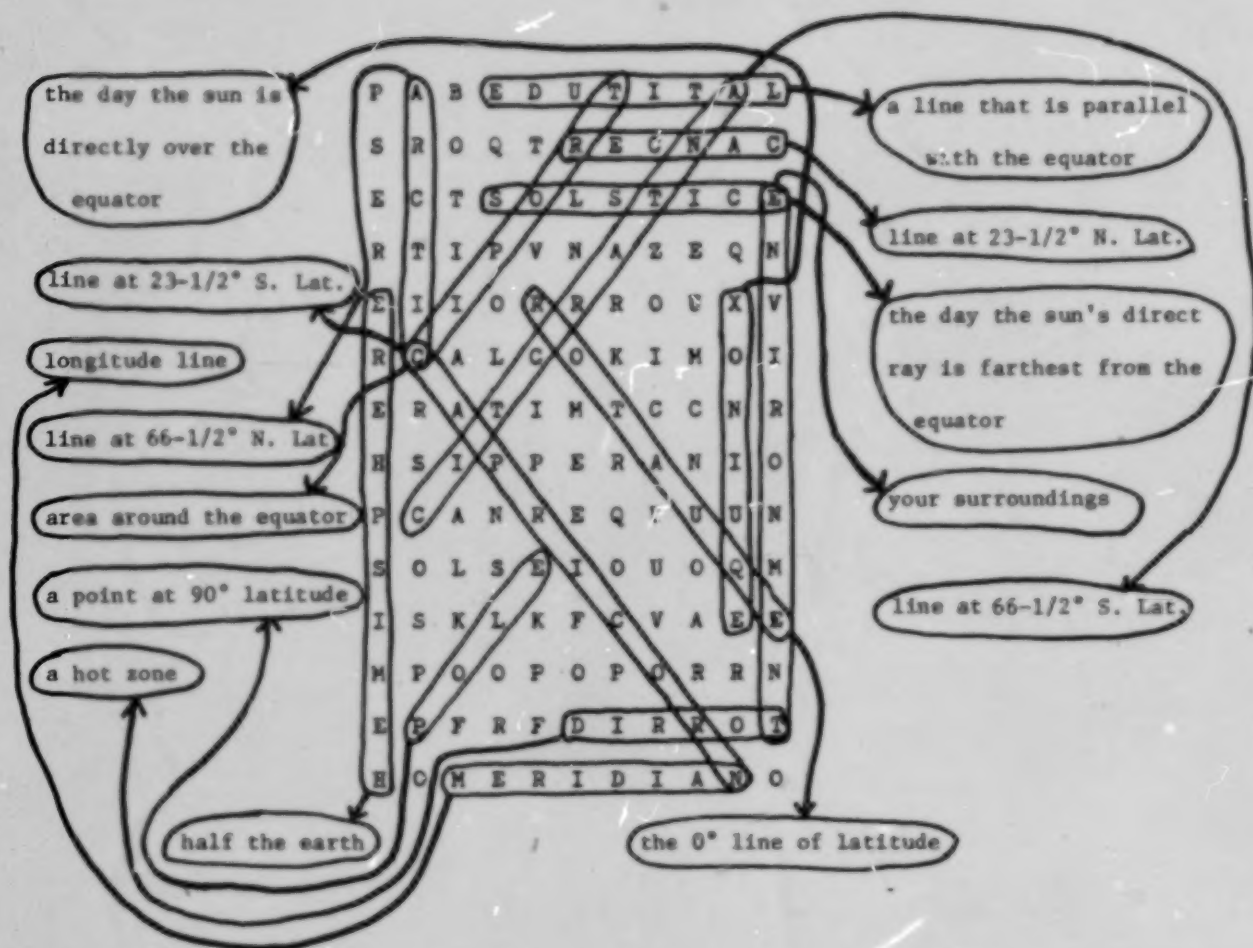
half the earth

the 0° line of latitude

1. c) (3) IDENTITIES TERMS USED IN
SOCIAL STUDIES

1. WORD MEANINGS
Social Studies
4-8

ANSWERS



1. c) (3) IDENTIFIES TERMS USED IN
SOCIAL STUDIES

1. WORD MEANINGS
Social Studies
4-12

Social Studies Letter-Scramble

Find the names of countries in the letter-scramble below and circle them. Then draw a line from the circled country to the description that matches it best. You may find the names by reading up and down and back and forth.

world's most populous country

Hindu country of 500 million people

world's largest nation

country with 50 states

largest country in North America

largest country in South America

the island continent

ancient country of the Nile

famous for fashion and Paris

famous part of the United Kingdom

located at western end of Mediterranean Sea

country of the Berlin wall

small industrial power of Asia

Spanish-speaking country of North America

B A I L A R T S U A S
E J O N D N P U G N E
C A N A D A B D A I T
N P M E I I R A N H A
A A E N G L A N D C T
R N X Y R Y P Z A R S
F I I N U L P E G B D
N G C A S A L T R H E
E E O M S T B A E U T
D E Q R I I Z U E T I
E I A E A I I T C A N
W A R G L A O S E M U
S W I T Z E R L A N D

Middle East country of Mesopotamia

country with largest population in Africa

land of the Inca Indians

The Roman Empire was centered here.

alps, chocolate, and cheese

home of the first city-states

Kampala is the capital.

the island famous for sugar

formerly called Persia

largest country in Africa

famous for the Nobel Peace Prize

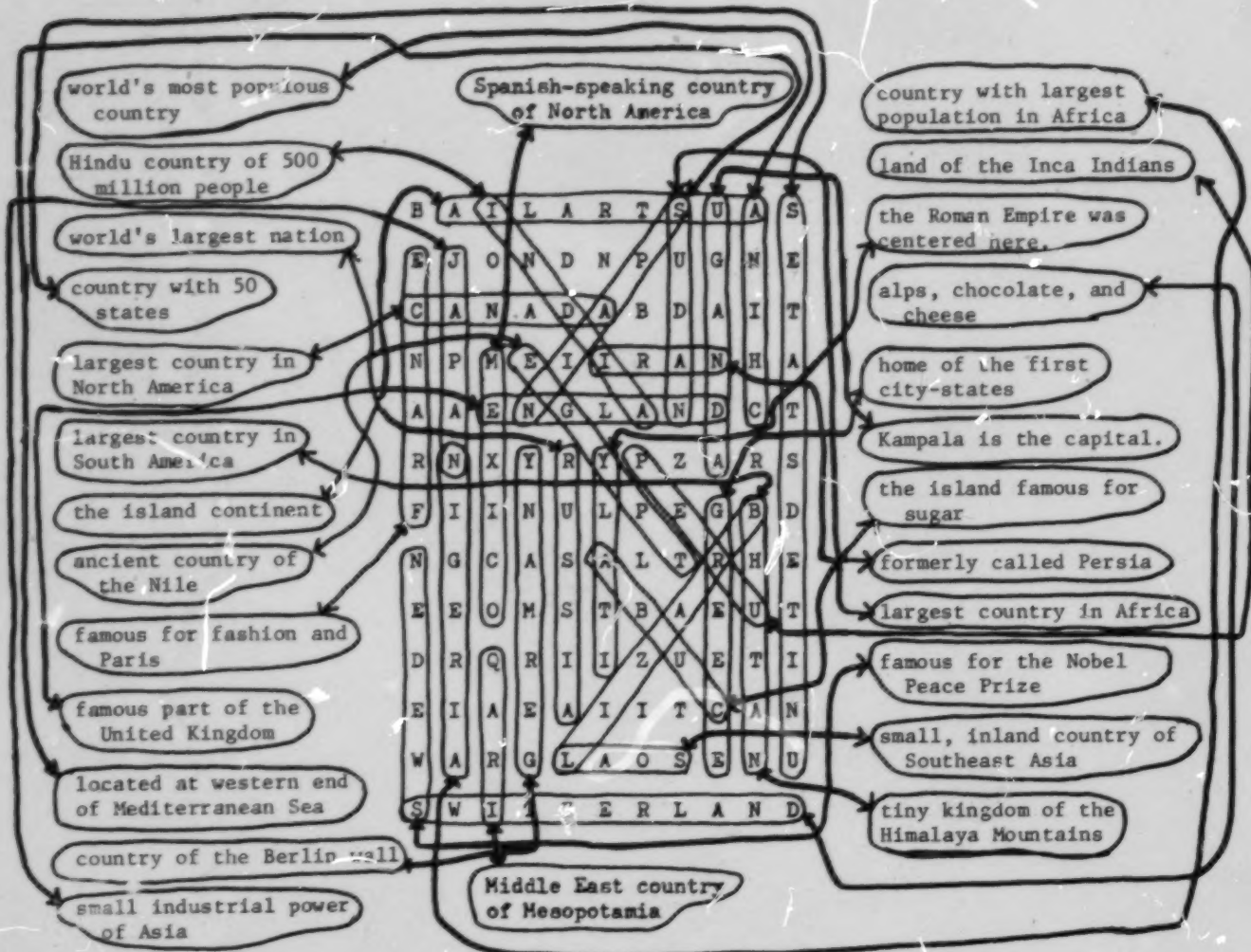
small, inland country of Southeast Asia

tiny kingdom of the Himalaya Mountains

1. c) (3) IDENTIFIES TERMS USED IN
SOCIAL STUDIES

1. WORD MEANINGS
Social Studies
4-12

ANSWERS



1. c) (3) IDENTIFIES TERMS USED IN
SOCIAL STUDIES
1. c) (4) IDENTIFIES TERMS USED IN
SCIENCE

1. WORD MEANINGS
Anacrostics

A sample anacrostic puzzle may be found on page 89, Instructional Objective 1.a)(3) in this curriculum guide.

Anacrostics on specific areas can also be found in *Geography Can Be Fun*.²⁶

Geographical terms, pp. 48-9

Map study, pp. 50-2

Weather and climate (especially good for Grade 8 science) pp. 52-4

France, pp. 54-6

India, pp. 56-8

Australia, pp. 58-60

1. c) (4) IDENTIFIES TERMS USED IN
SCIENCE

1. WORD MEANINGS
Science
4-8

Science Letter-Scramble

Find the science terms in the letter-scramble below and circle them. Then draw a line to the definition from the circled term.

the force that holds
the planets in orbit

a small group of stars

the planet farthest
from the sun

a far-away body
that emits light

F E T E N A L P O R O L P

the "red planet,"
earth's nearest
neighbor

a large meteor with
a glowing tail

M N O P E Q L R G S T D O

O T U L P U S R R M T V K

C O N S T E L L A T I O N

O Q I O U N I R V E B S R

the largest planet

the circular path of
a planet around the
sun

M Z V U N N S Z I F R G U

E S E N E V R A T S O T T

the entirety of
outer space

the center of our
solar system

T M R G A L A X Y V U X A

D R S O N D A Y G L M T S

G R E T I P U J P A L A G

a large group of
stars, such as the
Milky Way

a large body circling
the sun

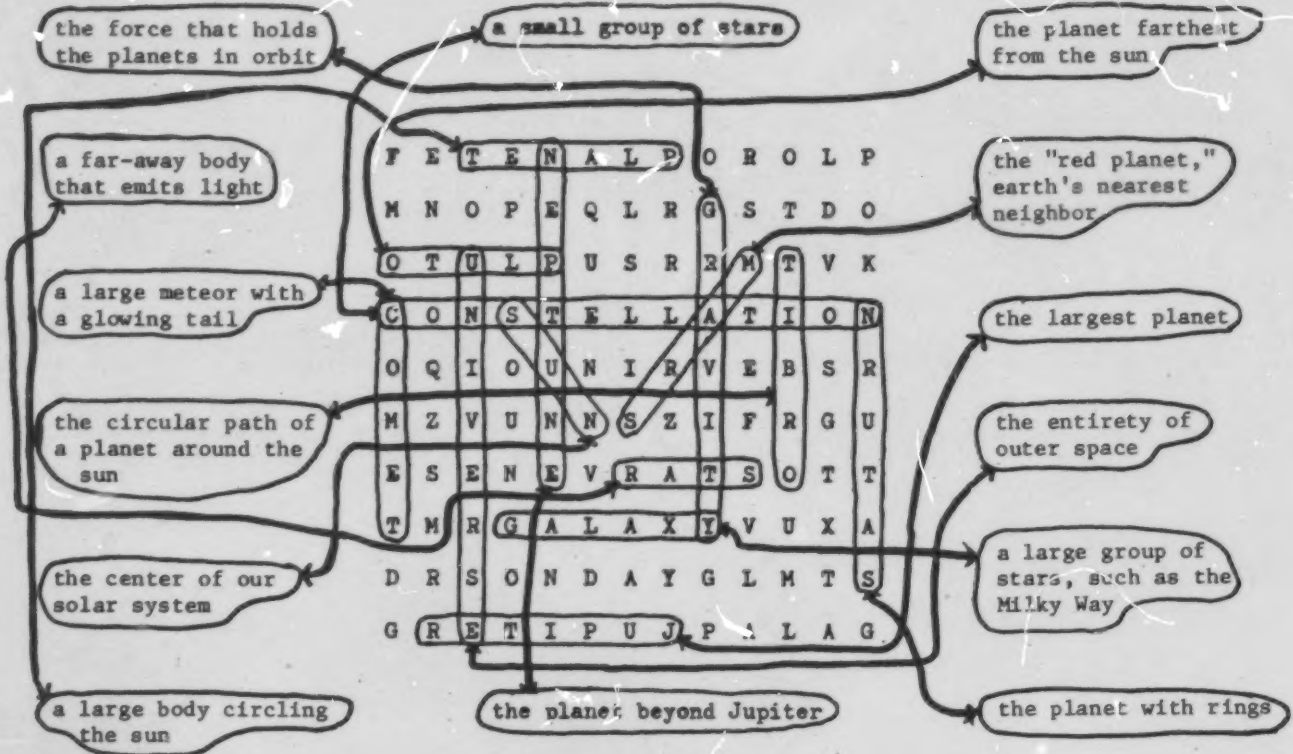
the planet beyond Jupiter

the planet with rings

1. c) (4) IDENTIFIES TERMS USED IN SCIENCE

1. WORD MEANINGS
Science
48

ANSWERS



1. c) (5) IDENTIFIES TERMS USED IN
BUSINESS AND COMMERCE

1. WORD MEANINGS
Business and Commerce Terms
9-12

Source: *The Work Oriented Curriculum, Grade 9, Phase 1*, MCPS Bulletin No. 225, 1969, p. 25.

Behavioral Objective: Builds a job-oriented and Business Math-oriented vocabulary

Procedures and Activities: List new and difficult words on the chalkboard that help explain the local business community and how it works:

retail
merchandise
services
schedule
reference
manage
personnel
personal
character
discharge

Resources: Student's own job experience

Evaluation: Student uses words properly in written assignment and oral review lessons.

1. f) FORMULATES DEFINITIONS IN
TERMS OF CLASS AND/OR DIS-
TINGUISHING CHARACTERIS-
TICS WHERE APPROPRIATE

1. WORD MEANINGS
Class and Characteristics
4-6

The Minister's Cat (Grades 4-6)²⁷

Directions: We will take turns around the room, describing the minister's cat, using adjectives beginning with "A."

For example, the first person might say, "The minister's cat is an alley cat," the second person, "The minister's cat is an arrogant cat," the third person, "The minister's cat is an awful cat," and so on.

If on your turn you cannot think of a word, or if you repeat a word already named, you become a ghost and are out of the game. Then we begin with the next person in line, this time using adjectives that begin with "B."

1. f) **FORMULATES DEFINITIONS IN
TERMS OF CLASS AND/OR DIS-
TINGUISHING CHARACTERIS-
TICS WHERE APPROPRIATE**

1. **WORD MEANINGS**
Class and Characteristics
4-8

Thought Wave (Grades 4-8)²⁸

Divide the class into two teams. Prepare a list of suitable key words such as ocean, geography, Arctic, castle, vacation, farm, sky.

"I will name a word such as ocean. The players on Team 1 may begin calling related words such as Pacific, water, waves, octopus, submarine, island, and so on. Raise your hand when you think of a related word, and name it when I point to you. For each acceptable word called, I will mark one point on the board.

When Team 1 can think of no more words, I will call a new word for Team 2, and they will respond in the same way. After each team has had its turn, the team with the highest score wins this set, and we will begin again."

Twenty Questions (Grade 4-8)²⁹

One person will be "It." He will think of a specific object anywhere in the world. We can then ask "It" 20 questions as we try to guess what that object is. "It" may answer only "Yes," "No," or "I don't know."

For example, if the object chosen were "Santa's sleigh," the questioning might go like this:

QUESTION: Is it an animal?

ANSWER: No.

QUESTION: Is it edible?

ANSWER: No.

QUESTION: Is it a vehicle?

ANSWER: Yes.

QUESTION: Is it used in water?

ANSWER: No.

QUESTION: Is it used in the air?

ANSWER: Yes.

QUESTION: Does it have wings?

ANSWER: No.

1. f) **FORMULATING DEFINITIONS IN
TERMS OF CLASS AND/OR DIS-
TINGUISHING CHARACTERIS-
TICS WHERE APPROPRIATE**

QUESTION: Is it a rocket?

ANSWER: No.

QUESTION: Is it used more in one season of the year than another?

ANSWER: Yes.

QUESTION: Is it Santa's sleigh?

ANSWER: Yes.

The person correctly naming the object becomes "It" for the next game. If no one guesses after all 20 questions have been asked, the same "It" remains for a new game.

Letter Toss³⁰

Make a set of flash cards, one showing each letter of the alphabet. Omit Q, X, Y and Z. Prepare a list of suitable categories, such as:

cities and countries
book titles
articles of furniture
girls' names
boys' names

flowers and trees
famous people
sports or games
animals
brand names

Name a category, "Cities and Countries," for example, and hold up a letter card. The first person to call out a city or country beginning with that letter will get the card.

When the set of cards is gone, the child holding the most cards is the winner. Collect the cards, pick a new category and begin again.

Precise Definitions (Grades 6-8)³¹

Make a chart as shown. In the "Key Word" column, list 10 or more nouns. Define the noun by first naming its class or category. Then describe what makes this particular item special within its class.

For example, to define "lemon," you would first say its category, "Fruit." Then, adding description to pinpoint the exact KIND of fruit, you could say, "A citrus fruit, yellow in color, sour in taste, with a thin outer peel and a juicy interior."

Without using dictionaries, let's see how well you can define these words, giving first the class or category, then the specific description.

1. **WORD MEANINGS**
Class and Characteristics
4-8

1. f) **FORMULATES DEFINITIONS IN TERMS OF CLASS AND/OR DISTINGUISHING CHARACTERISTICS WHERE APPROPRIATE**

1. **WORD MEANINGS**
Class and Characteristics
4-8

KEY WORDS

CLASS

SPECIFIC DESCRIPTION

1. eyebrow 2. thunder 3. Bolivia 4. canal 5. nickel 6. llama 7. tomorrow 8. joy 9. vase 10. vein		
---	--	--

1. **WORD MEANINGS**
Class and Characteristics
7-12

The following example is taken from MCPS Language Arts Mini-Report No. 3, March 1970.

TERM

CLASS

CHARACTERISTICS(S)

A carrot

is a root vegetable

which is orange in color, a tapered cylinder in shape, a source of Vitamin A, and edible raw or cooked.

Osmosis

is a process in which

solutions flow through a semipermeable membrane.

Parallel

is the relationship

of planes or lines which will never intersect no matter how far they are extended.

A fable

is a story

which employs analogy between the subhuman and the human world. The purpose of the story may be practical or illustrative.

1. g) **FORMULATES OPERATIONAL
DEFINITIONS WHERE APPROPRI-
ATE**

1. **WORD MEANINGS**
Operational Definitions
7-12

One teacher suggests that role-playing works well in having students formulate definitions. For example:

Assembly line--

1. Have five students each stand in front of a stack of papers needing collating and stapling.
2. First student starts, puts his sheet on bottom and hands stack to next person.
3. Last student staples the total pack.

Examples of words which might be operationally defined:

culture
power
haiku

environment
brainstorming
declarative sentence

democracy
character
comedy

NEWSPAPERS: ACTION RESEARCH ON THE "HOW" AND "WHAT" OF COMPREHENSION

The following section, written by Marie Petrenko, assistant principal of Twinbrook Elementary School, describes a research project directed by Dr. Petrenko in the Montgomery County Public Schools. This research explored the "How" and "What" of using newspapers to develop both word analysis and comprehension skills.

The "How" should provide teachers with some understanding of the theory and rationale for using newspapers as described. The "What" is intended to suggest worthwhile and enjoyable classroom learning experiences. Four detailed lesson plans with accompanying newspaper articles are included as well as (1) the criteria used for choosing particular newspaper items and (2) an analysis of the effectiveness of varied categories of newspaper articles.

The project description is placed here, in the Word Meanings section, because vocabulary development is a major aspect of the experiences described. However, the skill development includes strong emphasis on many of the specific objectives listed in the other eight comprehension categories.

• • • • •

A long-term study of those newspaper items that could be used effectively, and the purposes for which they could be used in an elementary reading/language arts program, was undertaken in a Montgomery County elementary school (1951-1965). One hundred ten students in Grades 4, 5, and 6 participated. The findings of this action research indicated that students, regardless of differences in talents and prior motivation, could be "turned on" to practice and increase their skills through the "thought power" skills of classifying, comparing, summarizing, observing, analyzing, looking for assumptions, interpreting, making inferences and analogies, and developing the Word Power skills of word analysis and vocabulary building.

THE "HOW"

Teacher Strategy

Inasmuch as language learning is a complex task which requires abundant and daily practice in meaningful communication, students practiced each day the process skills inherent in written expression, reading, listening, and oral expression.

Skills were practiced in an environment of cooperation, and differences of thinking and feeling were encouraged. Each student was allowed to say what he wanted to say in his own way. The student's natural unique mode of expression was respected. However, creative experiences in manipulating sentences and words were planned so that a student could acquire growing sensitivity to the beauty and power of language.

Open-ended questioning and visual literacy were the crux of the teacher strategy. The teacher's questions required the students not only to identify, define, or recall, but concentrated especially on opportunities for students also to compare, contrast, make inferences, imagine, interpret, or generalize on the basis of shared information or to apply ideas gained from oral discussion and reading. Open-ended questions helped students to develop an appreciation for different ways of saying and seeing things.

The teacher set the focus through questions which determined those points students could mentally and orally explore. Through questions, some ideas were picked up for elaboration; some were accepted; and some were passed over. The teacher's "antennas" were constantly directed toward extending questions, on timing questions, and on the length of time spent on a particular focus. Questions were presented to encourage students to think in new ways; to develop fluidity of association; and to probe new meaning and ideas.

The newspaper abounds in visuals — photographs, maps, graphs, advertisements, comics. A visual helps a student to draw upon his memory which is stocked with a whole vocabulary of visuals. Visual literacy parallels verbal literacy in that both have main ideas, sentences, and paragraphs.

Classroom Procedure

Without ideas, a student cannot express himself in writing. Therefore, expanding students' speaking and understanding vocabulary was the point of departure EACH DAY of the 90-minute reading/language arts program.

Word Power development activities preceded written expression and/or silent, individual, or group reading. These activities were used to give students opportunities for oral practice (1) to develop sensitivity to variant or multiple meanings of words and phrases (idioms, figurative language, relational words, synonyms, time words, etc.); (2) to acquire and apply skills in recoding and decoding words; and (3) to extend word analysis skills (recognizing such language structures as root words, spelling patterns, compound words, prefixes and suffixes, contractions). For example, it was not important for the student to know that "current" and "currant" were homonyms, but it was important for the student to experience and explore orally the thought processes of comparing and contrasting the similarities and differences of the two words.

Illogical figures of speech, built on opposites ("calm storm") or based on clichés ("brow like a mountain") kept students alert to the language's helping them become creative readers rather than passive receivers of information.

The oral and listening activities were followed by written expression and reading. Written expression was in the form of describing sentences; main ideas in one sentence, two words, or phrases; descriptive or factual paragraphs; factual and opinion reports, outlines, summaries; creative stories, poems, and plays; cartoons; and advertisements.

A student's sense of values and point of view differ from that of the adult. Students were permitted to express themselves in their own way.

Each student lends his unique quality to his writing, and his uniqueness contributes to his style. One's personality is often reflected in the process of writing and should be respected. Not every story will reach the stage of fruition; a student may start with a burst of enthusiasm only to find later that his idea does not work.

Grammar and spelling were learned through reading and written expression. Formal grammar — that is, defining or identifying parts of speech — was not taught. Developing student's sensitivity to the use of the right word or to the relationship of words to each other in the student's oral and written expression was the teacher's strategy in contrast to having the student fill in a blank with the appropriate word or identify a word as a verb or noun.

Evaluation

Students used notebooks for all daily written work. The purpose of notebooks was twofold. First, each month, the student and teacher evaluated the student's achievement in terms of objectives jointly set up by them. Second, notebooks became a continuous progress report for parents. Each student was helped to establish his performance outcomes in reading and in oral and written expression.

The following criteria were used by the student and teacher in determining which was the next instructional level to attain in written and oral expression:

1. Number and kind of patterns, phrases, and clauses used
2. Use of relational and directional words — yet, however, toward . . .
3. Organization of ideas
4. Use of time and place
5. Degree to which expressive vocabulary was used

Growth in vocabulary power was measured by the diversity in oral and written usage and by quality of the vocabulary and wealth of ideas. Students practiced initiative and responsibility for self-instruction by applying the principle of self-correction in improving their work. Criteria were established both by the class and by individual students. One student's self-evaluation check lists for written expression included:

1. Are my points clearly expressed?
2. Are my words and phrases well chosen?
3. Do I use vivid figures of speech?
4. Is my language appropriate for class audience?

Evaluation was inherent in the daily reading and reaction to written expression.

Some of the assessment items that were used as criteria for evaluating progress in reading comprehension were in the form of:

1. Read and summarize a paragraph.
2. List topics of sequence in a feature story.
3. Express main idea or ideas in a sentence, paragraph, advertisement.
4. Create a title for what you have read or seen in the chart, picture . . .
5. Describe in paragraph form what you see in the picture.

THE "WHAT"

"What" Visual and Verbal Language of a Newspaper Can Be Used?

In selecting or programming newspaper items for planning daily lessons in language development, the following criteria were applied:

1. Motivational potential
2. Experience levels of students
3. Maturity of interests and special interest areas
4. Length of items
5. Complexity of sentence structure, relational words
6. Variety of clauses and phrases
7. Levels of process of thought skills — concrete, abstract
8. Vocabulary — challenging, concrete, abstract

Representative data from the newspaper that were used most effectively are classified under the following categories:

- | | |
|---------------------------|--|
| 1. Charts, maps, diagrams | 8. Sports |
| 2. Animals | 9. Holidays |
| 3. Food | 10. Art |
| 4. Clothing | 11. Household furnishings and appliances |
| 5. Transportation | 12. Construction or building structures |
| 6. Weather | 13. Communication |
| 7. Accidents | 14. Religion |
| | 15. People |

1. CHARTS, MAPS, AND DIAGRAMS are a visual representation of tabular data, requiring the student to understand its mechanical features and to interpret the data. The ability of the student to interpret the data depended on his background of experience. If a chart presented data relating to economics, then the student had to have knowledge of the economic conditions at his comprehension level. Topics like defense spending that required interpreting abstract concepts beyond the student's experience did not present successful learning situations.
2. Newspaper articles about ANIMALS usually dealt with (1) such factual information about animals as appearance and age and (2) animal characteristics. The students characterized animals, compared animals and humans, used metaphors, and pretended to be animals. Some of the stories students created were about the age and movements of animals. The animal category motivated students to read fictional and non-fictional animal stories and myths.

3. FOOD appealed to all students. The senses of taste, feel, and smell played an important role in the use of the food articles. Two types of materials were used: (1) feature stories that related factual information about food or food customs, and (2) food display advertisements.

Feature stories were found to be most effective in developing such skills as summarizing, outlining, ordering sequence of events, and analyzing functionally the structures of sentences.

Food advertisements were used by students in (1) many elements of thinking as making assumptions, comparing, elaborating, or exploring possibilities . . . and in (2) the "play" with words — combining words in an appealing and forceful way.

In addition, organizational skills were practiced. As an example, students were given a "make believe" fifteen dollars. A menu for their family's Sunday dinner was to be planned and the food for it was to be purchased. The student's menu was planned after reading newspaper food advertisements. The name of the store, the name of the food, the quantity, the price per unit, and the total price were to be noted. Each student was responsible for devising his method of presenting the information. Organization of this data was an excellent lesson for the teacher to learn about the students' levels of thinking, organizational skills, sequencing, and skills of classifying, comparing, and application.

Instructionally, food advertisements were stimulants for all students — the gifted, the average, the slow learner. Repetition of the same words in various advertisements each day provided opportunities for reinforcement and exposure until the word was part of each student's speaking and written vocabulary.

4. Students' minds became question boxes when manufacturing processes of CLOTHING were the agenda for the day. This included, for example, the processing of the cotton plant, silk worm, flax, or synthetic fibres; the weaving of the thread; the design of the fabric; styling and manufacturing of clothing; merchandising the clothing; and families as consumers of wearing apparel.
5. TRANSPORTATION such as automobiles, airplanes, bicycles, and horses interested all students. The highest motivation for automobiles, however, was among the boys, whose greatest aspiration was to drive a car. Display advertisements about automobiles generated imagination with such assignments as "Write about your dream car" or "Design the outside and inside of a car in the year 2000." A student's oral presentation of his design on construction paper or a 3D design on the bulletin board stimulated interaction with his peers. Advertisements were used as career counselling in the services vocations.
6. Newspaper articles about the WEATHER used verbal and printed symbols quaintly. They lent themselves to the use of similes, metaphors, and personification. Picturesque expressions and photographs depicted scenes which permitted students to hypothesize about events. Concepts about the birth of storms or the formation of clouds were reinforced in imaginative stories. Also, the "play" with words encouraged the student to feel and see imaginatively and to practice the skills of interpretation and synthesis. (Mark Twain once wrote that the difference between the right word and the almost right word is the difference between lightning and lightning bug.)

7. Newspaper items about ACCIDENTS that involved objects were effective in stimulating skills in varied thought processes; word analysis; and vocabulary development through reading, speaking, listening, and written expression. People were often interwoven into the action of the students' imaginary stories. Damaged structures and conveyors frequently were given human characteristics. Students hypothesized the events that might have led to the action, and they often gave thought to the consequences resulting from the accident. Generally, the details of the accident accounts in the newspaper evoked little interest from the student.
8. Since appreciation of athletic ability is widespread among students, interest in reading SPORTS newspaper stories and in writing factual and creative stories was generated. Newspaper sports articles, for the most part, portray factual occurrences at games. So skills such as eliciting facts, following directions, summarizing, outlining, imagining, elaborating events, or exploring possibilities were practiced. For example, students would generate hypotheses about difficulties of the game or of particular plays or players. Qualities of a good game were heatedly evaluated.
9. HOLIDAYS, SPECIAL EVENTS, SHOPPERS, AND TRADITIONAL CUSTOMS were the usual themes of the instructional holiday newspaper photographs and feature stories. These newspaper items led to practice in skills of empathizing, fact-gathering, summarizing, and in ordering or sequencing memorable events from the past by reflecting feelings experienced in the past with those of the present. And above all, the students tested out and discovered the effectiveness of different kinds of phrases and words in written expression and in speaking.
10. ART photographs or printed materials selected for instruction were chosen for their color, shape, design, or texture appeal. The students reacted to these sensory stimuli orally or in writing.
11. Display advertisements of HOUSEHOLD FURNISHINGS AND APPLIANCES provided instruction in practicing skills of observation, interpretation, and imagination. Factual and opinion words were compared as they related to buying power.

Students were intensely interested in household gadgets about which they had no previous knowledge. For example, a photograph of a meat thermometer evoked much discussion in which it was compared with a mouth thermometer and a weather thermometer. Electrical gadgets like saws, sanders, shoe shine kits, and electrical toothbrushes brought on lively discussions and learning situations. Creative stories and descriptive paragraphs followed the discussions.

12. Newspaper photos of STRUCTURES created curiosity. Words used in picture captions lent themselves to constructing and interpreting similes, personification, or metaphors. The composition or ideas of the photographs motivated the students to interpret, imagine, or make inferences. The students generalized about important elements that are found in structures, hypothesized about the events that led up to the action depicted, and discussed possible consequences.

"Can you imagine . . ." sessions encouraged divergency in thinking. Students evaluated ideas and elements in a discussion of "Why is this building being constructed in this shape?"

13. Items relating to COMMUNICATION technology were not usually effective instructional materials. The contents, both visual and printed, were presented too abstractly or subtly for the student to understand. Also, the themes or main ideas were not usually within the students' immediate environment.

By Elinor Lee

CAN YOU THINK of anything more appetizing for breakfast, lunch or dinner this first week in March than homemade bread?

There's nothing better than hot-from-the-oven bread to banish midwinter doldrums. And these days, everybody seems to be baking bread. Both new and experienced cooks are bragging about their plain and fancy loaves or rolls.

BREAD IS, and always has been, man's most important food. For more than 6000 years people all over the world have been making various kinds of bread.

Prehistoric man learned early to collect and eat the seeds of wild grasses. As soon as he learned to use fire, he began making porridge by boiling the seeds in earthen vessels. By chance one day, he left a mixture of seeds and grasses on a rock in the hot sun and it baked. He decided he liked it that way.

The Egyptians started baking bread in earnest around 3000 B.C., when they invented the oven. The Egyptian oven was a hive-shaped structure of sun-dried brick, with a small opening at the top. It had a separate fire box. The oven interior was divided horizontally by a clay shelf. The upper part was for baking; the lower part held the fire.

New York's Metropolitan Museum of Art has paintings, 3500 years old, showing the Egyptian process of baking, from the mixing of dough to serving the bread.

Egyptian bakers probably discovered raised dough accidentally, by neglecting flour and water dough until it became contaminated with airborne wild yeast. But they were quick to capitalize on their discovery by saving some of the "started" dough for their next batch of bread. They were making 70 kinds of breads by the time Moses led his people out of Egypt, historians claim.

IN THE U.S., bread and baking were so important that one of the earliest industrial plants was a flour mill, set up in New York in 1626.

In early New England, wheat and rye bread included some Indian meal. This was the original Boston Brown Bread, about which Mathew Henry wrote: "It was a common saying among the Puritans, Brown Bread and the Gospel is good fare."



Mrs. Lee

Hot bread and hospitality were synonymous in the Old Dominion and all through the South. In fact, the fame of Southern cooking got its start with hot breads some gourmets claim.

Sally Lums, served at Williamsburg, Va., during Colonial days, is a favorite today. The original "receipt," borrowed from the British, is world famous. And the dish is a food feature at the Williamsburg Inn and King's Arms in the restored Colonial capital.

Other typical Southern breads that are being revived by modern home bakers both north and south of the Mason-Dixon line include Pecan Sugar Swirls, sugary individual buns for breakfast or tea, and Raisin Oatmeal Bread.

6000 Years

Have Kept

It Fresh

Bread Cuts

A Slice

Right Out

Of History

14. RELIGIOUS topics have abstract and relative values. Those newspaper items dealing with religion which seemed appropriate were those which gave factual information to the student. For example, "The Festival of Lights," "The Eternal Flame at the Kennedy Grave," and "The Light of the Pilgrims" were compared as a result of a photograph of the "Festival of Lights."

15. PEOPLE were interesting to students if some experiential association could be made with them. Activities about students like themselves or their siblings were most effective for instruction.

Dignitaries or high ranking governmental officials provided little stimulus for the students. An adult who was similar to someone in the immediate environment of the student sometimes sparked imagination or interest. Newspaper items about people were best for practicing skills of imagination and empathy with characters.

16. EDITORIALS, editorial cartoons, current news, or "hard news" items about such areas as taxation, political aspects of war, or the economy did not lend themselves to developing or practicing comprehension skills or communication skills. The sentence structure, abstract vocabulary, and abstract concepts in editorials or news items were generally beyond the students' comprehension.

*"What" Newspaper Items Were Used? How Were They Used? Some Illustrations**

Lesson Plan: "Bread"

I. Purpose

A. To develop Word Power skills

Vocabulary development:

appetizing	banish	doldrums
prehistoric	porridge	earthen vessels
in earnest	hive-shaped structure	interior
dough	accidentally	contaminated
airborne wild yeast	capitalize	industrial plants
"started" dough	food feature	

B. To practice Thought Power skills

summarize	contrast	association
interpretation	inference	

II. Procedure

A. Teacher selected vocabulary words from newspaper, and students copied them in notebooks as each word was pronounced. Oral interaction with meanings of vocabulary cited above was prompted.

*All of the newspaper items appeared in the *Washington Post* and are reproduced here with their permission.



By Dick Darcy, Staff Photographer

Interlaced Roadways for Highway Network of Tomorrow

A maze of roadways that are intended to work into Washington's Inner Loop forms an interesting pattern in this photo made from a helicopter flying over Washington Channel in the vicinity of 14th st. sw. The highway at extreme right, which curves through the center of the picture to the left, carries inbound traffic to the 12th st.

tunnel under the Mall. The center three lanes are intended for eastbound traffic headed for the Southwest Freeway while the four lanes at left bring westbound motorists to the 14th st. bridge and carries them into Virginia. The Capitol and other Federal buildings are in the background.

B. Feature item was read silently — individually or student selected groups.

C. Written expression

1. Write an outline for the feature article, using the title, "History of Bread."
2. What paragraph does not belong to the "History of Bread?" Why?
3. Describe a slice or loaf of rye bread, wheat bread, Boston Brown Bread, and white bread.
4. Compare your mother's oven with an Egyptian oven.

Note: In practicing outlining or summarizing, the written expression was always followed by oral class interaction of what word thoughts could or could not be accepted for main ideas. It was seldom that there was only one way to say what the main idea was, and different main ideas were frequently acceptable as long as the students could justify their ideas. Teacher and students practiced frequently as a class, constructing models for outlining.

Lesson Plan: "Transportation"

I. Purpose

A. To develop Word Power skills

1. Word analysis:

prefixes "inter" and "in"

compound words: eastbound, inbound, southwest, network, roadway

2. Vocabulary development:

multiple meanings of

interlaced

maze

intend

vicinity

extreme

headed

curve (contrast with curb)

capitol (contrast with capital)

B. To practice Thought Power skills

relational reading

comparisons

analogies

II. Procedure

Variety of questions or direction stimulated oral interaction and practice in Thought Power skills.

A. Are your shoe laces interlaced? Is the "interlacing" of shoelaces the same or different from the "interlacing" of roadways?



Associated Press

Casualty of the Fog

The Navy destroyer N.K. Perry heads for her berth at Tampa, Fla., after a collision in the early morning fog yesterday caused

this gash in the craft's bow. The warship, en route to Charleston, S.C., collided with a sulphur-laden barge.

- B. Read the specific words that tell the kind of roadway we read about.
- C. Why are these roadways "an interesting pattern"?
- D. Does the root of the word "headed" in this article have any similarity to the word that refers to your head?
- E. Is a sentence ever a maze? Explain.
- F. Could an animal cage have a maze? Describe.
- G. What words tell about the photograph? About the highway at the extreme right?
- H. Read the specific words that describe the eastbound traffic.
- I. Where do you hear the word "network" everyday?
- J. Compare the roadway "network" to others you know, as radio or TV network.
- K. Name the shapes you see. Describe them.
- L. Written Expression

Write a story, poem, or play using

"interlace roadways"
 "interesting pattern"
 "inbound traffic"

Lesson Plan: "Casualty of the Fog"

I. Purpose

A. To develop Word Power skills

1. Word analysis:

Why is an apostrophe used in the word "craft's?"

Inflections -

letters "ed" sound /ed/ in "collided"
 letters "ed" sound /d/ in "caused"
 letters "er" sound /r/ in "destroyer"

2. Vocabulary development:

variant meanings of

heads gash bow enroute
 casualty (contrast with cause)

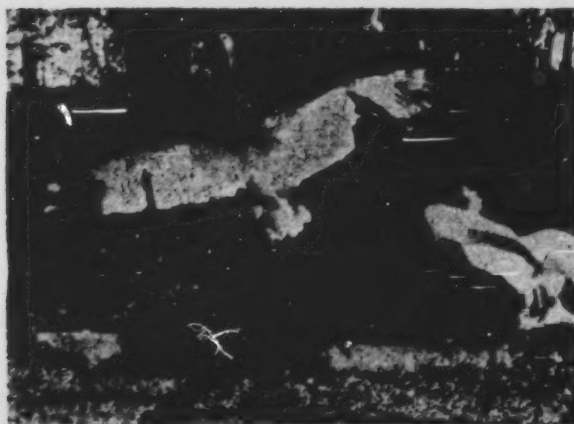


By Tom Kelley, Staff Photographer

It Failed in Re-Entry Phase

George Miller, 11, had no problems while his kite was sailing in the **sky blue** yonder, but it was a different story when he attempted to bring it **in** for a landing.

As kites are prone to do, this one dipped into the branches of a nearby tree, where its line became hopelessly tangled. George lives at 2101 Rockland ave., Rockville.

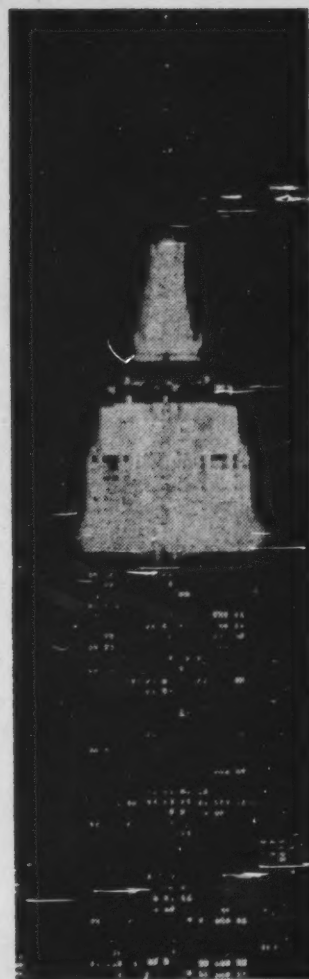


United Press International

Whoops, Said the Crane, It's Spring!

Basil, one of the lady whooping cranes now residing at the Audubon Park Zoo in New Orleans, gives her cousin, Georgette, a **not-so-sly** reminder that it's spring.

Seven of the rare whoopers are now living at the New Orleans zoo where keepers hope there'll be a population explosion to keep the species going.



Associated Press

Tower of Light

The tower portions of New York's Empire State Building have been illuminated to signal the approaching opening of the World's Fair in Flushing Meadow. This photo was made from the 70-story RCA Building.

berth (contrast with birth)
collide, colliding, collision
destroy, destroyer, destroyed, destroying

Teacher's questions directed to elicit that words have basic root meanings.

B. To practice Thought Power skills

comparison

contrast

observation

II. Procedure

A. Oral interaction among students

1. Compare "sulphur laden barge" with an "apple laden tree."
2. Compare word "gash" in your leg with word "gash" in reference to the destroyer you read about.
3. What do you think is the shape and size of the destroyer? How do you know?

B. Culminating assignment in form of written expression

1. In one sentence, write the main idea of the words that you have read under the photograph.
2. Was the destroyer traveling from East to West or North to South? Why?
3. Describe the weather.
4. From what you have read, write what the purpose of the destroyer is.

Lesson Plan: "The Crane, A Kite Flying, The Tower of Light"

I. Purpose

A. To develop Word Power skills

1. Word analysis

Sound /shun/ in words: portion, population, illumination, explosion

Prefix "re" in re-entry

Inflections "ed" "ly" "es" in illuminated, branches, hopelessly, attempted, tangled, dipped

Why were "it's" and "there'll" spelled with an apostrophe?

2. Vocabulary development:

variant and multiple meanings of

portion
approach
crane

illuminate
reside
problem

species
wild blue yonder
rare keepers

prone

What's the difference in meaning in reside, resident, residence?

What's the difference in meaning in explode, explosion, exploding?

B. To practice Thought Power skills

imagination

analogies

comparison

relational comprehension

II. Reason for selecting the three newspaper items, all from the same paper

A. Opportunity for students to compare processes and structure

B. The boy in the photograph was known to most of the students.

C. The photographs of the building, the animals, and the boy gave students practice in several levels of thinking.

III. Procedure

A. Teacher prescreened vocabulary to be studied. (Words for expanding student's meaning; vocabulary were selected as well as words for rote reinforcement and for spelling patterns.)

B. Lesson began with oral discussion of meanings and use of words cited under Vocabulary Development.

C. Students turned to each photograph separately.

1. In the title under the Kite photograph, what does the word "it" refer to?

What is meant by "re-entry phase"? To what does "this one" refer?

Are meanings of "dipped" different in "This one dipped into branches" and "We dipped the scoop into the ice cream?" How are they the same?

Note: In comparison questions, it is easier for students to begin with the dissimilar.

2. Under the photograph "Tower of Light," name the words that tell you why the title is "Tower of Light."

3. Read sentences under the photograph "The Crane." To what does "not-so-sly reminder" refer? And "it's" refers to what?

Why do zoo people "... hope there'll be a population explosion?"

4. What dissimilarities and similarities do the three photographs portray?

What do we consider when we compare?

This question was asked frequently during the year so that teacher and students could produce models of how to go about comparing. Students need to practice comparing not only size and shape, but also structure, function or process, materials, etc.

D. Culminated with written expression

1. In one sentence in your own words, write the main idea of the printed words you read under the photographs of the kite, the crane, the light.
2. Use the three titles and incorporate them into a creative or imaginary story.
3. These visuals could be used to practice math skills relating to space and number. For example:
 - a) Estimate how far from the ground the boy is perched on the tree. How do you know?
 - b) Do we have sets in the three photographs? If so, name them.
 - c) Compare shapes of objects in the three photographs.
 - d) Which crane is off the ground? Guess how far. Prove it.

(Notice how these "math" skills tie in with the thought processes listed in the Instructional Objectives of this bulletin.)

FOOTNOTES

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6. Emerald V. Dechant, *Improving the Teaching of Reading*, 2nd ed., © 1970, pp. 362-406. By permission of Prentice-Hall, Inc., Englewood Cliffs., N.J.
7. *Ibid.*, p. 402.
8. *Ibid.*, pp. 397-398.
9. H. Alan Robinson and Ellen Lamar Thomas, editors, *Fusing Reading Skills and Content* (Newark, Del.: International Reading Association, 1969).
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18. Mary E. Platts, *Anchor* (Stevensville, Mich.: Educational Service, Inc., 1970), p. 36.
19. *Ibid.*, p. 84.
20. *Ibid.*, p. 97.

21. *Ibid.*, p. 101.

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23. *Ibid.*, p. 107.

24. *Ibid.*, p. 96.

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26. Christobel Cordell, *Geography Can Be Fun* (Bangor, Me.: J. Weston Walch), 1970.

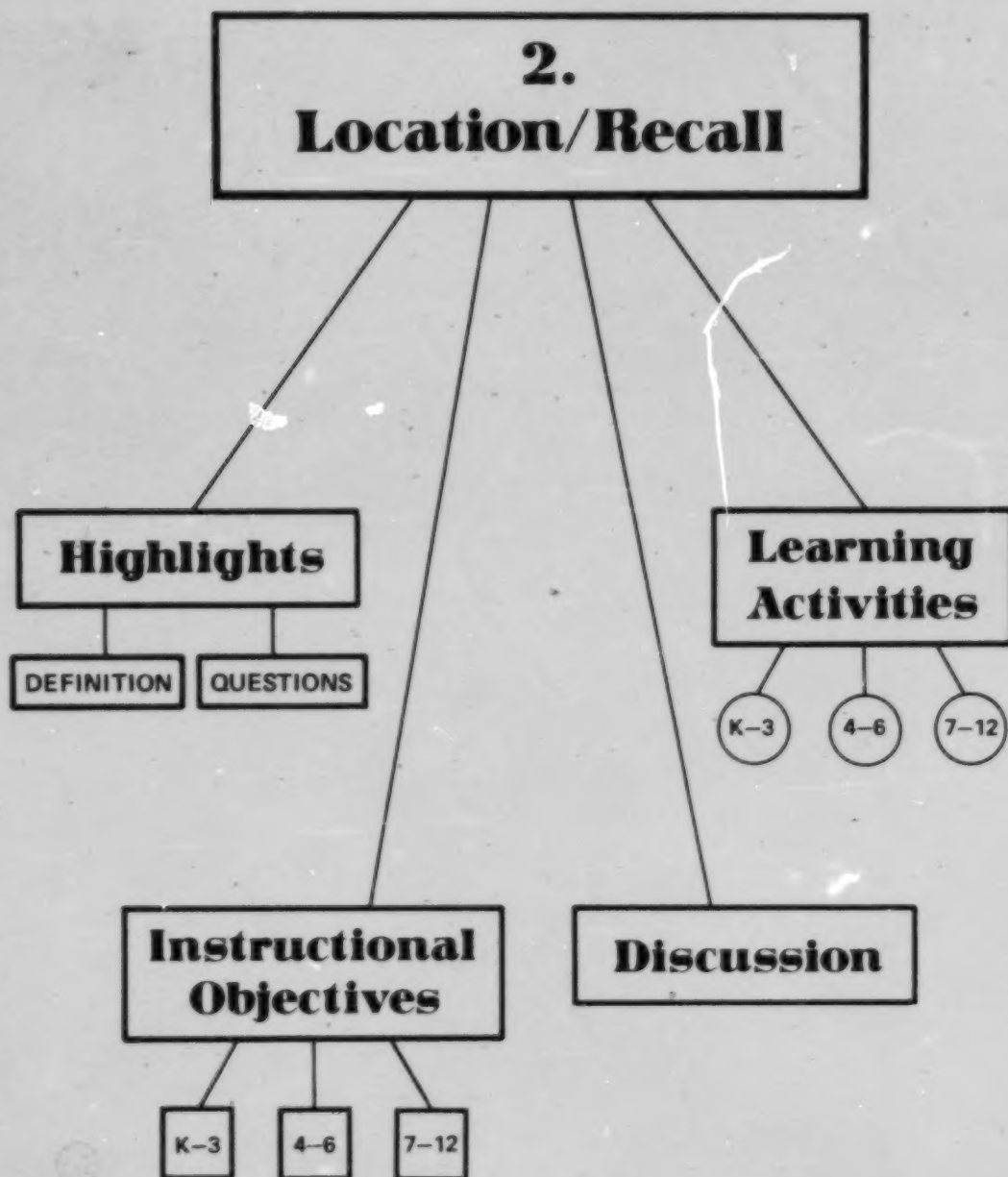
27. Platts, *Anchor*, p. 3.

28. *Ibid.*, p. 4.

29. *Ibid.*, p. 8.

30. *Ibid.*, p. 9.

31. *Ibid.*, p. 103.



2. LOCATION/RECALL
Highlights

2. LOCATES AND/OR RECALLS SPECIFIC INFORMATION

- Finding information
- Recognizing information
- Remembering information
- Dealing with facts
- Understanding at literal level
- Using information as given

Who did _____? How many _____?

Where did _____?

When did _____?

Can you find _____?

Can you recall _____?

Can you name _____?

Can you list the _____?

What method _____?

Can you use this _____ to find this _____?
(source)

Instructional Objectives

LOCATION/RECALL

2. LOCATES AND/OR RECALLS SPECIFIC INFORMATION

Suggested Instructional Level

- a) Locates information in print and nonprint materials (e.g., in a picture, filmstrip, tape, narrative, paragraph, chapter, article, or report) (Student may be asked to recall orally or in writing.)
- b) Locates information in different sections of a newspaper
- c) Uses parts of a book as guides to content
 - (1) Uses cover, title page, and/or copyright information
 - (2) Uses table of contents to locate a general topic
 - (3) Uses preface as an indication of content
 - (4) Uses index to locate specific information
 - (5) Uses typical organization of a chapter as a guide to content (title; introductory statement; boldface, italicized, and marginal headings; footnotes; summary)
 - (6) Uses appendix and/or bibliography to locate supplementary information
- d) Locates information in a dictionary
 - (1) Uses illustrations as guides to word meanings
 - (2) Uses entry words to locate word meanings, synonyms
 - (a) Alphabetizes by first letter
 - (b) Alphabetizes by second letter
 - (c) Alphabetizes by subsequent letters
 - (3) Uses numbered definitions to find different meanings, precise shades of meaning
 - (4) Uses diacritical marks as guides to pronunciation
 - (5) Uses guide words

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*
		*
*	*	*
*	*	*
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Instructional Objectives

LOCATION/RECALL (continued)

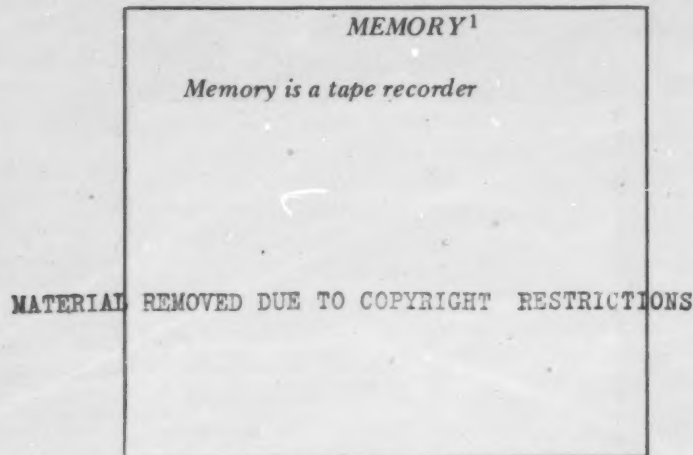
	Suggested Instructional Level		
	K-3	4-6	7-12
(6) Uses cross references for additional information, synonyms			*
(7) Uses special sections (Colleges and Universities in the U.S., Foreign Terms, Pronouncing Gazetteer)			*
(8) Uses Explanatory Notes, Guide to Pronunciation, and Abbreviations Used			*
e) Locates information in an encyclopedia	*	*	*
f) Locates and uses information in functional reading (e.g., employment information, sales agreement, warranty, credit card terms)		*	*
g) Locates information in a glossary		*	*
h) Locates information in a thesaurus		*	*
i) Locates information in a telephone directory		*	*
j) Locates information in a TV guide or timetable		*	*
k) Locates information in an atlas		*	*
l) Locates information in an almanac		*	*
m) Locates information in a magazine, pamphlet, or brochure		*	*
n) Locates information in a catalog or advertisement		*	*
o) Locates information in a concert or theater program		*	*
p) Uses media center guides			
(1) Uses card or book catalog		*	*
(2) Uses periodical or magazine index		*	*

2. LOCATION/RECALL

Discussion

Are students sharp in noting details, first in the environment, then in pictures, ultimately in varied print and non-print material? How perceptive are your students in finding information? Do they know how and where to look up information? Which of this information do you, the teacher, feel the students should remember? The knowledge acquired at this literal level of the comprehension continuum is used in the thinking which takes place at all of the more complex levels of comprehension.

Teachers are often reminded to avoid overemphasis on questions asking for facts. Some knowledge of facts, however, is necessary. Some facts and dates are important in their own right — 1776, for example. Facts to be located in reading matter might include significant dates, events, names of important persons, and places. Also important for a student to know are the specific sources where different kinds of factual information can be located — such as the dictionary, encyclopedia, atlas, and newspaper. Activities for developing the ability to use these sources of factual information have been included here. Finally, a certain amount of knowledge of facts is necessary as the basis for arriving at the broader concepts and generalizations in any field of study.



Sanders notes that "the memory category is indispensable on all levels of thinking. The more important and useful knowledge a student possess, the better his chances for success in other categories of thought."² At the same time, Sanders points out three weaknesses of questions in the memory category: the rapid rate of forgetting, the rather low level of understanding that memorized knowledge may represent, and the danger of neglect of the higher intellectual processes which are learned through practice. "A student best learns to draw inductive conclusions by practice — not by memorizing the inductive conclusions of others. A student best learns to organize ideas by performing the process of organizing rather than by memorizing an orderly pattern of ideas."³

To locate, to organize, and to remember — each has a place in the educational day. Many different techniques are available to students, each being useful for specific purposes. For example, SQ3R, a well-known study method of reading,⁴ specifies a structure for locating, organizing, and remembering information.

2. LOCATION/RECALL Discussion

S = Survey
Q = Question
3R = Read, Recite, Review

1. Survey

This might include:

- a) Survey the entire book.
- b) Study table of contents.
- c) Read introductory paragraph.
- d) Skim rapidly over the material.
- e) Note headings and subheadings.
- f) Note key words.
- g) Note pictures, graphs, maps.
- h) Read the concluding paragraph.

This survey or prereading gives a general idea of what will be covered or studied later.

2. Question.

This might include:

- a) Student asks own questions.
- b) Use questions asked by author.
- c) Use questions posed in lectures or class activities.
- d) Turn headings into questions.
- e) Think of questions logically posed by subject matter.
- f) Questions may be written down.
- g) Questions may be kept in memory.

2. LOCATION/RECALL
Discussion

3. Read.

This might include:

- a) Find answers to the questions per step 2.
- b) Concentrate on main ideas.
- c) Put ideas into own words.
- d) If notetaking is indicated, read through each section first; then make notes.
- e) Read everything, including graphs, tables . . .
- f) Read actively, not passively.
- g) Ask yourself what it's all about as you read.

4. Recite.

This might include:

- a) Quiz self on material just covered.
- b) Recite immediately after first learning.
- c) Recite section by section.
- d) Can student answer questions per step 2?
- e) Can student point out main and supporting ideas?
- f) Is the entire assignment clear?
- g) Amount of recitation?

Up to 90% for memorizing rules, formulas . . .

As little as 30% for well organized story-like material (history, literature . . .)

2. LOCATION/RECALL Discussion

5. Review.

This might include:

- a) Resurvey headings and summaries.
- b) Reread to check on accuracy of recitation.
- c) Review briefly immediately after first study of material.
- d) One or two reviews may be appropriate before final review. These could probably emphasize rereading.
- e) Final review should be intensive and thorough, perhaps emphasizing recitation.

* * *

Teachers may consider the Learning Activities on the following pages, which suggest experiences in locating, recognizing, and recalling information, as a first step in guiding students to the higher thought processes described in subsequent sections.

2. a) *LOCATES INFORMATION IN A NARRATIVE*

2. LOCATION/RECALL Narrative K-3

Beginning readers may need help in setting their purpose for reading a passage if they are trying to find specific information. It may be helpful to phrase a question as "What words in the story tell you that . . ." or "Find the part (or sentence or phrase) that describes . . ."

At the primary level, questions might direct children to find the following kinds of factual information specifically stated in a story:

1. Setting (time and place)
2. Narrator
3. Main and subordinate characters

2. a) *LOCATES INFORMATION IN A
NARRATIVE*

2. **LOCATION/RECALL**
Narrative
K-3

4. Character traits, motives, reactions

5. Events of a plot

If the character traits are not specifically stated but must be inferred from the character's actions, a higher level of thinking is required (Interpretation, category 4).

Similarly, if some events are not specifically stated but must be filled in (interpolated) by the reader, this requires thinking at the level of Prediction (category 5).

2. **LOCATION/RECALL**
Narrative
4-6

This activity may be done either orally, using the overhead projector, or as an individual written exercise, depending on the needs of the children.

Reading for Facts (Social Studies)

In 1492, Christopher Columbus and some sailors left from Spain with three small ships, the Nina, the Pinta, and the Santa Maria. Columbus wanted to find a new trade route to India. After several months and many hardships, land was sighted. Copper-skinned people appeared; and since Columbus thought he had reached India, he called these strange people "Indians." Later this new land was called "America," but the people Columbus found there are still called "Indians."

What facts are given in this paragraph? Write the answer by each question that is answered in the paragraph. Write No by the questions that are not answered in the paragraph.

1. When did Columbus sail from Spain? _____
2. Why did Columbus call the people he found "Indians?" _____
3. How did America get its name? _____
4. How many days did it take Columbus to reach America? _____
5. Why did Columbus think he had found India? _____
6. How did Columbus find a new way to India? _____
7. How many ships did Columbus have? _____

2. a) *LOCATES INFORMATION IN A
NARRATIVE*

2. **LOCATION/RECALL**
Narrative
4-6

8. Where did Columbus land in America? _____

9. Who gave the Indians their name? _____

Directions: Give the students the following story and ask them to write answers to the questions at the end.

Big Bear

An Indian named Big Bear was hunter and trapper before he went to Europe as a soldier during World War I. After the war ended in Europe, he returned to the place where he used to trap animals for their fur. There he found that trappers had killed nearly all the fur-bearing animals to make big profits. Big Bear traveled for hundreds of miles through the northern forests, but saw only a few rabbits and foxes. Finally, he decided to give up trapping.

In his travels by canoe, Big Bear came to a fine lake. Nearby he cleared an area among the trees, built himself a snug little cabin, and with his wife tamed beavers and studied their ways. One day Big Bear began to care for a family of young beavers that had lost their mother. Beavers are the shyest of animals, but this family grew to be real pets and built their dam near Big Bear's cabin.

Two of the beavers named Paddle Tail and Brownie remained at the cabin. Whenever Big Bear returned from a trip, they greeted him with squeals of delight and tugged at his pack for apples and treats.

Big Bear became so well known as an expert on animal life that the Government paid him to save other wild animals as well as the beavers.

Questions:

1. What was Big Bear's first occupation? Why did he stop this work?
2. When Big Bear returned from the war, where was the first place he went?
3. When Big Bear arrived at the lake, what were the first four things he did?
4. How did the government help Big Bear in his work?

2. a) *LOCATES INFORMATION IN
NON-PRINT MATERIALS*

2. **LOCATION/RECALL**
Locates and Recalls
Specific Information:
Non-print
4-12

An 8mm loop film is a continuous film presentation without sound. See it a few times and then complete the following report.⁵

- a) Title of the loop
- b) Write briefly what you found out when you viewed this film. Write each piece of information on a different line like this. Use as many lines as you need.

2. a) *LOCATES INFORMATION IN
PRINT AND NON-PRINT
MATERIALS (FOR EXAMPLE,
IN A PICTURE, NARRATIVE, . . .)*

2. **LOCATION/RECALL**
Narrative
10-12

WOC Curriculum

English materials from the *Work Oriented Curriculum, Phase II, Grade 10, Curriculum Guide*, July 1963, contain a number of reading lessons such as one entitled "A Story About Distributing Businesses." Most of the questions that go with the stories are at the level of Location/Recall of facts. The teacher using these stories might consider the possibility of introducing into the class discussions questions that will help students develop thinking at the Interpretation (category 4) level.

2. b) *LOCATES INFORMATION IN
DIFFERENT SECTIONS OF A
NEWSPAPER*

2. **LOCATION/RECALL**
Newspaper
3-6

The parts of a newspaper to which the reader would turn for factual information (as distinguished from editorial opinion, interpretation, and material in pictorial or cartoon form) are:

- (1) News stories (headlines, lead paragraph, subsequent paragraphs)
- (2) Feature stories
- (3) Special sections (sports, food, style, theater, real estate)
- (4) Entertainment page (movie, theatre, and concert schedules)
- (5) TV Guide
- (6) Shopping ads
- (7) Classified ads

The guide *492 Ways to Use a Newspaper in the Elementary Classroom*, originally prepared by the *Courier-Journal* and the *Louisville Times*, has been reproduced by MCPS and made available to all Montgomery County elementary teachers. The following excerpts are examples of activities related to locating specific factual information in a newspaper:

LANGUAGE ARTS

- Use clippings for a "Show and Tell" period. Tell what, where, when, who, why, and/or how the incident happened.
- Name some syndicates that send news to the local paper.

2. b) *LOCATES INFORMATION IN
DIFFERENT SECTIONS OF A
NEWSPAPER*

2. **LOCATION/RECALL**
Newspaper
3-6

- Compile a list of questions and answers from news items and other features of the paper; use them as "brain teasers."
- Bring an interesting short article to read to the class. Have several questions prepared for the class to find answers.
- Study the format of the local newspaper. Locate:
 - news stories — their location according to importance
 - news stories — where they are continued or concluded
 - local items — where they are located
 - feature articles
 - editorial page
 - classified ads
 - full-page ads
 - entertainment features
 - special sections
- Examine the local paper to find:
 - what columnists are featured
 - what press services are used
 - what comics appear
 - what feature writers are contributors
 - what cartoonists are featured

2. b) **LOCATES INFORMATION IN
DIFFERENT SECTIONS OF A
NEWSPAPER**

2. **LOCATION/RECALL**
Newspaper
3-6

SOCIAL STUDIES

- Keep files of newspaper clippings. If a commercial file is not available, one can be made from a cardboard box. The filing can be done by a committee. The file may be organized as follows:

a file by subject matter — region or county

a file of maps, charts, graphs

a file of historical data related to an area

a file concerning Congressional activities

- List the geographical terms used in newspaper items. From the front page of one issue might be found:

jungle area

coastal plain

islands

ocean

bay

- Use a copy of the paper. Mark with different colored crayons local news, national news, and international news.
- Locate the names in the news items. Note the divisions of international, national, and local.
- Collect clippings of the daily work on the legislative, judicial, and executive branches of the government. Use these materials in the display area.
- Follow your interest in a particular county for a period of time. Clip and file material for future reference.
- Blackboard Question Box

All classmates use a copy of the same paper. The teacher writes on the board a number of questions covering a wide range of news items. Each one tries to find as many answers as possible in a limited time.

2. b) **LOCATES INFORMATION IN
DIFFERENT SECTIONS OF A
NEWSPAPER**

2 **LOCATION/RECALL**
Newspaper
3-6

- **Group Reports**

Divide the class into three groups — reporters of local news, reporters of national news, reporters of international news. Rotate the responsibilities of the groups.

- **Newspaper Readers Club**

Organize the class into a reading club. Special committees are responsible for reporting on various phases of the news or features of the paper.

SCIENCE

- Prepare and conduct class or school broadcasts pertaining to current science events. Emphasize the *who*, *what*, *why*, *when*, *where*, and *how*.
- Bring in pictures or news items about scientists. Compile a *Who's Who in Science*.
- Keep a diary of the launching of weather satellites.

MATHEMATICS

- Find salary for a specified job such as a waitress in a classified advertisement:

Is the salary stated

- on a daily basis?
- on a weekly basis?
- on a monthly basis?
- on a yearly basis?

USING THE MOVIE DIRECTORY

Do you want to go to the theater to see a movie?

In what section of your newspaper will you find the Movie Directory?

Select a movie you'd like to see.

- At what theater is it playing?
- Where is the theater?
- At what time does the movie begin?
- Do you have a choice of times?
- Is the price of admission given?

2. b) *LOCATES INFORMATION IN
DIFFERENT SECTIONS OF A
NEWSPAPER*

2. *LOCATION/RECALL
Newspaper
3-6*

Notice that the Movie Directory is divided into four main parts.

What are the four parts?

Why is this kind of division a good idea?

How are the movies listed in each of the four parts?

What other information do you think should be included to help you select a movie you might want to see?

What do the movie rating symbols stand for?

2. *LOCATION/RECALL
Newspaper
4-8*

NATIONAL CONFERENCE

		Eastern Division			
		W	L	T	Pct.
X	Washington	13	0	0	1.000
	Dallas	8	5	0	.615
	New York	5	8	0	.385
	St. Louis	3	9	1	.269
	Philadelphia	3	10	0	.231
		Central Division			
X	Minnesota	10	3	0	.769
	Chicago	9	4	0	.692
	Detroit	7	6	0	.538
	Green Bay	1	12	0	.077
		<i>X Clinched division title</i>			

1. Which two teams will play in the playoffs from the National Conference?

- a) Washington/Dallas
b) Washington/Chicago

- c) Minnesota/Washington
d) Dallas/Chicago

2. Which team has the lowest winning percentage?

- a) Chicago
b) Green Bay

- c) St. Louis
d) New York

2. c) (1) **USES TITLE PAGE AND
COPYRIGHT INFORMATION**

2. **LOCATION/RECALL**
Title Page and Copyright
Information
4-6

THE TITLE PAGE

The title page is near the front of the book and tells some important things about the book.

Title — the name of the book

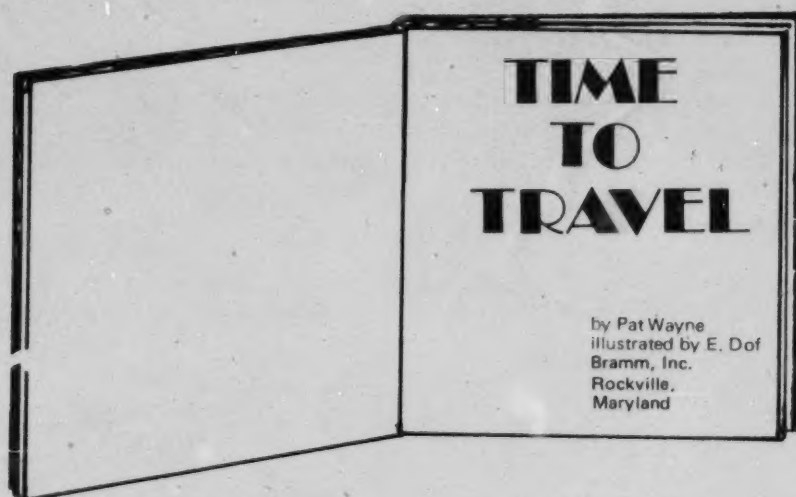
Author — the name of the person who wrote the book

Illustrator — the name of the person who drew the pictures

Publisher — the company that prepared the book for sale

Place of Publication — the city where the publisher's main office is located

Copyright Date — the year the book was published (usually appears on the back of the title page)



Find the title page in a library book. Tell the following about your book:

TITLE _____ AUTHOR _____

ILLUSTRATOR _____ PUBLISHER _____

PLACE OF PUBLICATION _____

COPYRIGHT DATE _____

2. c) (4) *USES INDEX TO LOCATE
SPECIFIC INFORMATION*

2. LOCATION/RECALL
Index
4-6

USING THE INDEX

The teacher displays on the blackboard, the overhead projector, or a chart a sample index topic and subtopics such as:

Automobiles

Definition, 103
Early experiments with, 104
Engines, 106
Increased use of, 114
Manufacture of, 110
Models of the future, 116
Modern types, 108
Travel by automobile, 115

The students are then asked to indicate pages they would turn to for certain information:

1. Who were some of the early inventors of automobiles?
2. How is the automobile powered?
3. How many automobiles are in use in the United States today?
4. Where are cars manufactured in the United States?
5. How does a modern car differ from those of the early days?

Arranging Items in an Index

The teacher prints lists of words or phrases, and the students indicate in what order they would be arranged in the index.

perennial plants
chlorophyll
osmosis

air pressure
uranium
helium

penicillin
electronics
hydrogen

At the beginning, this activity would involve simple alphabetical order. As the students learn about outlining and about main and subtopics, the activity can be expanded to include arranging main and subtopic index items.

Index - Using Key Words

The students are given a list of questions, in each of which one or more words are underlined. This is the key word under which they would look. They are to draw a broken line under another word in each question for which they would look in an index if the information could not be found under the key word. Examples:

1. In what part of Pennsylvania is coal mining an important industry?
2. What is the value of the annual orange crop in the state of Florida?
3. Where are the important ocean currents in the Pacific Ocean?

2. c) (4) *USES INDEX TO LOCATE
SPECIFIC INFORMATION*

2. *LOCATION/RECALL*
Index
4-6

The next step is to have children themselves select the key word. They may be given a list of questions based on a particular indexed textbook. In each question, there should be one word which, when looked up in the index, will lead to the information that answers the question. The children select and underline the key word in each sentence. Examples:

1. What state leads in the production of soybeans?
2. What is the chief industry of Maryland?
3. What are the most important products carried by freighters on the Great Lakes?

2. d) *LOCATES INFORMATION IN
A DICTIONARY*

2. *LOCATION/RECALL*
Dictionary
K-12

In planning dictionary work, the teacher might keep in mind the cautionary note of John Holt in his chapter "Making Children Hate Reading" from *The Underachieving School*.

He observes that teachers learn very few of the approximately 25,000 words in their own vocabularies by looking them up in a dictionary. "They learned them just as they learned to talk — by meeting words over and over again, in different contexts, until they saw how they fitted . . . I think a big, unabridged dictionary is a fine thing to have in any home or classroom. No book is more fun to browse around in — if you're not made to. Children, depending on their age, will find many pleasant and interesting things to do with a big dictionary. They can look up funny-sounding words, which they like, or words that nobody else in the class has ever heard of, which they like, or long words, which they like, or forbidden words, which they like best of all. At a certain age, and particularly with a little encouragement from parents or teachers, they may become very interested in where words came from and when they came into the language and how their meanings have changed over the years. But exploring for the fun of it is very different from looking up words out of your reading because you're going to get into trouble with your teacher if you don't."⁶

The following list of instructional objectives is organized around three major aspects of dictionary skills:

1. Using the dictionary to locate words
2. Using the dictionary to pronounce words
3. Using the dictionary to locate meanings of words

2. d) *LOCATES INFORMATION IN
A DICTIONARY*

2. *LOCATION/RECALL*
Dictionary
K-12

This list is an extension of those objectives which are listed on pages 135-136.

1. Can locate words
 - a) Knows alphabet symbols
 - b) Can arrange alphabet symbols in order
 - c) Can arrange words in alphabetical order by first letter
 - d) Can arrange words in alphabetical order by second or later letters
 - e) Uses quarterly divisions of the dictionary to locate word areas
 - f) Uses guide words to locate the word
 - g) Can identify an entry word on a given page
 - h) Can locate word to verify spelling
2. Can use dictionary to pronounce words
 - a) Can use phonetic respelling of a word to pronounce word
 - b) Can use diacritical markings
 - c) Can use pronunciation key
 - d) Can identify auditorily the accented syllables
 - e) Can use primary accent markings
 - f) Can read words containing shifts in accents
3. Can use dictionary to locate meanings of words
 - a) Uses illustrations as guides to word meanings
 - b) Uses numbered definitions to find different meanings, precise shades of meaning
 - c) Can use dictionary abbreviations, e.g., n = noun
 - d) Can use cross references to locate synonyms and antonyms for a word
 - e) Can relate derived forms to base forms
 - f) Can distinguish good current usage from slang or obsolete usage
 - g) Can tell origin of word
4. Uses special sections (Colleges and Universities in the U.S., Foreign Terms, Pronouncing Gazetteer)
5. Uses Explanatory Notes, Guide to Pronunciation and Abbreviations Used

BUILDING GAME

Each letter of the alphabet is printed on three 2x3 cards — a total of seventy-eight cards. The cards are shuffled and six are dealt to each player. The remainder of the cards are placed face down on the table. The students take turns drawing a card and playing. If a student has four letters running in sequence (a-b-c-d), (m-n-o-p), he may lay the cards down before him and draw other cards as he finishes his play with six cards in his hand. If a student draws a card and cannot play, he discards one. A student may build on another's sequence when the cards are laid on the table, but he keeps the cards he has played in front of him. The student wins who has the most cards at the end of the game. This game may be modified by using words beginning with the letters of the alphabet, the student alphabetizing the words.

2. d) *LOCATES INFORMATION IN
A DICTIONARY*

2. **LOCATION/RECALL**
Dictionary/Alphabetizing
K-3

2. d) (2) (a) *ALPHABETIZES BY
FIRST LETTER*

At the primary level, one of the features of a dictionary which needs to be stressed is the alphabetical order of the entry words. Skill in using alphabetical order may be developed through games like the following:

ALPHABET ZOO

Make your own zoo.

Capture as many animals as you can.

Write their names in the cages.

You may have more than one animal in some of the cages.

Some cages may be empty.

Four animals are already captured to give you a start.

A 	B bear	C 	D 	E
F fox	G 	H 	I 	J
K 	L lion	M 	N 	O
P 	Q 	R 	S seal	T
U 	V 	W 	X 	Y
Z 				

2. d) *LOCATES INFORMATION IN
A DICTIONARY*

2. *LOCATION/RECALL
Dictionary/Alphabetizing
K-6*

As students gain proficiency in alphabetizing by the first letters of words, they will advance to alphabetizing by the second or third letter when first letters are the same.

ALPHABETIZING RACE

Each team is given a list of words. First player goes to board, writes the number of the word which comes first in alphabetical order, and passes card to second player who writes number of second word. The first team to finish correctly wins. The game may also be played by two players or by one person as a self-checking activity.

List 1	List 2	List 3	List 4
1. blue	1. which	1. try	1. chop
2. believe	2. whom	2. tricycle	2. cheap
3. balloon	3. white	3. trunk	3. child
4. block	4. whole	4. track	4. chest
5. bleak	5. when	5. troll	5. chair
6. bell	6. whiz	6. trap	6. Christmas
7. broom	7. why	7. tree	7. chain
8. begin	8. whale	8. treasure	8. choose
9. bite	9. wheat	9. train	9. chin
10. black	10. where	10. trial	10. Charles
11. boast	11. who	11. trip	11. children
12. bin	12. while	12. truck	12. cheer
13. beware	13. whine	13. tired	13. cheese
14. brow	14. whose	14. trail	14. chore
15. behave	15. wheel	15. trot	

2. d) *LOCATES INFORMATION IN
A DICTIONARY*

2. *LOCATION/RECALL
Dictionary/Definitions
4-8*

WHAT WOULD YOU DO ?

1. ____ if someone gave you a *gratuity*? a) say "Thank you" b) punch him in the nose c) call the police
2. ____ if you were in a *loge*? a) call your lawyer b) drive carefully c) enjoy the show
3. ____ if your friend were *mesmerized*? a) rush him to the hospital b) wake him up c) try to be understanding
4. ____ with the *endocarp* of a peach? a) eat it b) peel it off c) plant it
5. ____ if you took a *promenade*? a) drink it b) take a leisurely walk in the park c) go for a swim in the pool
6. ____ if you heard *confidential* news? a) hurry to tell it b) keep it secret c) put it in the newspaper
7. ____ if you practiced *etiquette*? a) play an instrument b) run and scream and throw a fit c) use your manners at the table
8. ____ if you *concealed* something? a) hide it b) swing it c) untangle it
9. ____ if you *commuted* a) sing b) worry c) travel
10. ____ if you were a *nimble* boy? a) lie in bed all day b) be quick and agile c) be clumsy and awkward in sports

2. *LOCATION/RECALL
Dictionary
4-9*

YOU DIRTY DOG!⁷

Make a list of the words in the example shown. Ten of these words are complimentary; and if someone called you these, you would very definitely say, "Thank You!"

The other ten, however, are very uncomplimentary; and if someone called you those, you might say, "You dirty dog!"

2. d) *LOCATES INFORMATION IN
A DICTIONARY*

2. *LOCATION/RECALL
Dictionary/Definitions
4-8*

Make two columns on your paper. Title one column *Thank you*. Title the other *You Dirty Dog!* Then put each listed adjective into the proper column to show your response if someone used that word to describe you.

You may use dictionaries to look up any unfamiliar words.

1. effusive
2. perspicacious
3. vapid
4. eccentric
5. eminent
6. indolent
7. august
8. repugnant
9. gregarious
10. benevolent

1. sagacious
2. miscreant
3. intrepid
4. maundering
5. amicable
6. malevolent
7. ludicrous
8. philanthropic
9. urbane
10. callow

2. d) (3) *USES NUMBERED DEFINITIONS
TO FIND DIFFERENT MEANINGS,
PRECISE SHADES OF MEANING*

2. *LOCATION/RECALL
Dictionary/Definitions
4-6*

DICTIONARY QUESTION BOX

Put in a box questions which can be answered by referring to the dictionary. Divide the class into teams, and give each student a dictionary. Have the leader draw a question and read it aloud. The first team to give the correct answer and the page on which it was found wins a point.

As students become familiar with the types of questions that are appropriate for this activity, a committee may be appointed to make up questions for the others.

Examples:

1. What are two *very different* meanings of "chow chow?"
2. In what sport is the word "chukker" used?
3. For what do the initials C.P.A. stand?
4. What is a peninsula?
5. Which syllable is stressed in "oregano?"
6. Is a huckster an animal, person, machine, or food?
7. What is an isthmus?

2. d) (3) *USES NUMBERED DEFINITIONS
TO FIND DIFFERENT MEANINGS;
- PRECISE SHADES OF MEANING*

2. LOCATION/RECALL
Dictionary/Definitions
4-6

8. What is the color of amethyst?
9. What is a philatelist interested in?
10. What is a blue racer?
11. Is a whale a fish or a mammal?
12. How many feet in a mile?
13. What is the difference between a scullion and a scallion?
14. How does the python kill its prey?
15. Is a foxglove an article of clothing, an animal, or a plant?
16. Is the bat a bird or an animal?
17. How does a wombat differ from a bat?
18. What are two animals whose names begin with Z?
19. What is coral?
20. What is a bighorn? What is a pronghorn?
21. What makes a rattlesnake rattle?
22. Who were the minutemen?
23. What is a gadid?
24. Is a critique a criminal, a criticism, or a crisis?
25. How is Gaelic pronounced?
26. What is the plural of "genius?"
27. What is the plural of "alumnus?"
28. What is the singular of "dice?"
29. What do "A.M." and "P.M." stand for?
30. What is a Pyrrhic victory? Where did the name come from?
31. Would you find a pyrrhulaxia in the ocean, in a flower pot, or in a tree?

2. LOCATION/RECALL
Dictionary/Homographs
4-8

Choose a word with several meanings and set up sentences using this word.

Foot

1. There are twelve inches in a *foot*.
2. The Eagle Scout walked to town by *foot*.
3. She broke a bone in her *foot*.
4. Dad offered to *foot* the bill for the new dress.

2. d) (3) *USES NUMBERED DEFINITIONS
TO FIND DIFFERENT MEANINGS,
PRECISE SHADES OF MEANING*

2. *LOCATION/RECALL*
Dictionary/Homographs
4-8

Light

1. A small boy carried the *light* package for his mother.
2. The only source of *light* in the room came from a 25W bulb.
3. The patch of meadow was *lighted* by the moon.

(For examples of other homographs — words spelled the same with different meanings — refer to *TEACHING READING SKILLS, Vol. I*, pp. A-111 and A-112. Students can find further examples such as strike, fast, scale, cast, stern, train, quarter, pitch, cabinet, stand, run, post.)

THINGS ARE NOT WHAT THEY SEEM

1. A sand dollar is not money. What is it?
2. A sea cucumber is not a cucumber. What is it?
3. A titmouse is not a mouse. What is it?
4. A prairie dog is not a dog. What is it?
5. A peanut is not actually a nut. What is it?
6. A sea cow is not a cow. What is it?
7. Beggar lice do not crawl. What are beggar lice?
8. A sea dog is not a dog. What is it?
9. A jackrabbit is not a rabbit. What is it?
10. A buttercup is not a cup. What is it?
11. A dandelion is not a lion. What is it?
12. A Belgian hare is not a hare. What is it?
13. A ladybird is not a bird. What is it?
14. Sea lilies are not lilies. What are they?
15. A fetlock is not a lock. What is it?
16. A sea horse is not a horse. What is it?
17. Sea anemones and sea lilies are not flowers. What are they?

Give students sentences containing words with unusual meanings. Ask them to use their dictionaries to see whether the word is properly used, and if so, to take notes on the new meaning of the word. Students and teachers can add to this list.

1. The man was *rooked* out of his winnings.
2. The girl had a good *purchase* on the rope.
3. A car ran off on the *berm* of a road.

2. d) (3) *USES NUMBERED DEFINITIONS
TO FIND DIFFERENT MEANINGS,
PRECISE SHADES OF MEANING*

2. **LOCATION/RECALL**
Dictionary/Homographs
4-8

4. The barnacles will *cleave* to the side of the boat.
5. The retiring minister was given a *purse* by his congregation.
6. She wore a pretty *print* to the party.
7. The drillers repaired the oil *rig*.
8. They punished the old *scold* by ducking her in a pond.
9. She wore a *stole* to the summerhouse.

2. e) *LOCATES INFORMATION IN
AN ENCYCLOPEDIA*
2. h) *LOCATES INFORMATION IN
A THESAURUS*
2. k) *LOCATES INFORMATION IN
AN ATLAS*
2. l) *LOCATES INFORMATION IN
AN ALMANAC*

2. **LOCATION/RECALL**
References
4-8

Reference Materials Various types of reference books are arranged in a numbered list. In a parallel column (but not in the same order) is a short description of the type of information to be found in the books. The student is to place the number of the reference book in front of the description that suits it.

Example:

- | | |
|---|---|
| 1. encyclopedia | (3) short biographies of famous people |
| 2. <i>The World Almanac</i> | (5) definitions of words |
| 3. <i>Who's Who in America</i> | (1) detailed reports on many subjects listed alphabetically |
| 4. thesaurus | (2) important yearly records of many kinds |
| 5. dictionary | (4) synonyms and antonyms |
| 6. <i>Readers' Guide to Periodical Literature</i> | (7) the exact words of a famous saying |
| 7. <i>Bartlett's Familiar Quotations</i> | (6) references to articles in recent magazines |
| 8. atlas | (8) collection of maps and index of place names |

2. e) LOCATES INFORMATION IN
AN ENCYCLOPEDIA

2. LOCATION/RECALL
Encyclopedia
4-8

USING ENCYCLOPEDIAS⁸

An encyclopedia may be a work of one volume or a set of books. It contains information on every subject and is usually called a *general encyclopedia*. However, an encyclopedia may contain information on one particular subject. Then it is often called a *special encyclopedia*. In both kinds of encyclopedias, articles are arranged alphabetically by subject.

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

E

2. e) LOCATES INFORMATION IN
AN ENCYCLOPEDIA

2. LOCATION/RECALL
Encyclopedia
4-12

To gain practice in using an encyclopedia, refer to the *World Book Encyclopedia Research Guide and Index*⁹. This index accompanies the 1973 edition.

Format of the study steps are:

Topics for study

Books to read

Other resources

Tapes, Film, Filmstrips

Other sources of information

Government Printing Office

Cross references under other topics in the encyclopedia

*Our Wonderful World*¹⁰ also publishes study guides to accompany their encyclopedia. The same procedure may be followed with this reference tool.

Use the exercises that accompany Compton's *Encyclopedia* to learn how to use this reference book to locate information. The booklet is entitled "*Know Your Encyclopedia in Seven Simple Steps.*"¹¹

- Example:
- | | |
|--------|--|
| Step 1 | Browsing |
| Step 2 | Arrangements of Articles |
| Step 3 | Special Learning Aids within Articles |
| Step 4 | Location, Arrangements, and Kinds of Entries in the Fact Index |
| Step 5 | Using the Fact Index |
| Step 6 | Cross References in the Encyclopedia |
| Step 7 | Summary Exercises |

Each step contains exercises for students to do. For example: There are practice exercises for each of the topics listed below.

- | | |
|--------|---------------------------------------|
| Step 3 | Special Learning Aids within Articles |
| | Pictures |
| | Maps |
| | Graphs, charts, diagrams and tables |
| | Bibliographies |
| | Fact summaries |
| | Reference outlines |

Every volume has a corresponding group of exercises such as the ones cited above.

2. f) *LOCATES AND USES INFORMATION
IN FUNCTIONAL READING (FOR
EXAMPLE: EMPLOYMENT INFORMATION,
SALES AGREEMENT, WARRANTY, CREDIT
CARD TERMS)*

2. **LOCATION/RECALL**
Functional Reading
4-12

The Maryland State Board of Education lists five state-wide learner goals in reading as part of the overall State plan in upgrading reading instruction and achievement. (See pages 39-40 for the list and description of the five reading goals.)

Goal number 4 states that "Each Maryland student who has achieved the objectives for reading established by the local school should . . .

4. **MEET THE READING DEMANDS FOR FUNCTIONING IN SOCIETY**

This goal prepares the student to survive in society by helping him to cope with everyday reading experiences (i.e., following directions, locating references, gaining information, understanding forms, and attaining personal development). Since it establishes a minimal performance level for students, this goal is of prime importance."^{1 2}

In order to determine the degree to which all or most Maryland students meet the above goal, the Maryland State Department of Education has developed the Basic Reading Mastery Test, Form A (12-year-old student), Form B (15-year-old student), and Form C (graduating high school senior). These tests measure a range of everyday practical reading needs.

The priority now is to develop instructional materials which will give students and teachers the opportunity to know specific areas of students' strengths and/or needs in handling basic and survival kinds of reading tasks. These include the ability to read, understand, and use the information in:

contracts (example, a service contract)
employment rules and regulations
occupation handbooks
warranties (example, appliance warranty)
company rules
sales agreements
credit card terms
grocery list
enrollment card

Several resources for basic practical reading materials are now available for teachers.

1. National Reading Center materials (See pages 168-70 of this guide for description of books and for sample lessons.)

2. f) *LOCATES AND USES INFORMATION
IN FUNCTIONAL READING*

2. *LOCATION/RECALL*
Functional Reading
4-12

2. *Survival Learning Materials*¹³

This booklet (one of whose authors, Marcia M. Barnes, is a reading teacher for MCPS) provides teachers with instructional materials using the following practical applications:

- Reading Labels (Toothpaste)
- Washing Instructions (Shirt)
- Locating Information (Table of Contents)
- Buying a Magazine
- Applications (Make sure you know what you are getting for your \$!)
- Credit Card Applications
- Local Map Reading
- Baking a Frozen Pie
- Do-It-Yourself Kit
- Understanding Sales Slips
- Examining a Sales Agreement
- Use of a Credit Card
- Reading a Maryland Driver's License
- Job Application

The Introduction includes suggestions to teachers for developing similar learning materials and for using the materials in a flexible manner. Three levels of questions (literal, interpretive, and problem solving) illustrate each set of learning materials. (For a description of these three levels, see cross-reference to *Reading and the Elementary School Child*,¹⁴ page 46 of this bulletin.) Maryland teachers may reproduce the materials in the *Survival Learning Materials* booklet. The following is a sample set of learning materials from that book:

USE OF A CREDIT CARD¹⁵

You might find it convenient some day to obtain a credit card. However, it is important that you know about the use of such cards. Here is one which can be used to purchase gasoline and oil. Read it carefully and then answer some of the questions about it.

Front Side	
BRAND X	Good thru
333 111 567	05 74

2. f) **LOCATES AND USES INFORMATION
IN FUNCTIONAL READING**

2. **LOCATION/RECALL**
Functional Reading
4-12

Back Side

Signature of cardholder

By acceptance of this credit card, you agree to the terms of issue and assume responsibility for authorized purchase prior to its return to Brand X. You may be liable for the unauthorized use of this card up to the amount of \$50. You will not be liable for unauthorized use which occurs after you have notified Brand X at Ralphsburg, New York, either orally or in writing.

This card remains the property of Brand X and can be recalled at any time.

Questions on use of a Credit Card. Pick one set and try it.

- Set 1.
1. Where is the company office located?
 2. To whom has the card been issued?
 3. What is the name of the gasoline company?
- Set 2.
1. Do you think this card is usable as is?
 2. What does "liable" mean to you?
 3. Who owns this card?
- Set 3.
1. What should you do if you lose this card?
 2. What should you do if you lose the card and cannot remember where the company is located?
 3. What do they mean when they say that you "assume responsibility for authorized purchases"?

Answers:

- Set 1.
1. Ralphsburg, New York
 2. Name of student doing set 1
 3. Brand X

2. f) *LOCATES AND USES INFORMATION
IN FUNCTIONAL READING*

2. **LOCATION/RECALL**
Functional Reading
4-12

- Set 2.
1. Probably not. It has not been signed and would not have to be honored.
 2. In this case, it means you would have to pay for unauthorized purchases up to \$50, unless you contact the company.
 3. Brand X — it says it remains the property of Brand X.
- Set 3.
1. Call or write Brand X in Ralphsburg, New York.
 2. It does not say; but you might go to a Brand X gasoline station and ask for the address.
 3. Again, it does not say; however, it means that if someone finds your lost card, or steals it, you must pay for their purchases even though you did not sign the purchase slips.

2. **LOCATION/RECALL**
Functional Reading/
Prescription Label
4-12

READING A PRESCRIPTION LABEL

When someone is ill and goes to a doctor, the doctor will often give the patient an order for medicine. The order is called a prescription (an Rx).

The prescription is taken to a drug store where it is filled by a druggist. The druggist places a label on the medication. The label will give the following information:

1. The date of the prescription
2. The number of prescription
3. The name of the patient
4. The name of the doctor who ordered the medication
5. The name of the medication
6. Orders for taking the medicine

1. Name the six things found on a prescription label.

- | | |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

2. f) *LOCATES AND USES INFORMATION
IN FUNCTIONAL READING*

2. **LOCATION/RECALL**
Functional Reading/
Prescription Label
4-12

2. Here are some sample prescriptions:

JONES'S PHARMACY	
MO4-7002	Bethesda, Md.
No. 110047	Dr. Edwards
John Doe	April 1, 1975
One tablet 4 times a day	FIXITAL

CORNER DRUG STORE	
150 N. Flint St.	Dayton, Idaho
No. 33001	Dr. Jones
One tablet at 8:00 a.m., 4:00 p.m., and bedtime	
SICKATATUM	
E. Smith	9/12/74
Cannot be refilled	

Read prescription No. 1. Fill in the blanks with the following information:

1. Name of the patient _____
2. Date of prescription _____
3. Name of drug store _____
4. Number of the prescription _____
5. Directions for taking medicine _____

6. Name of the doctor who ordered the medicine _____
7. Name of medication _____

Read prescription No. 2. Fill in the blanks with the following information:

1. Name of the patient _____
2. Number of the prescription _____

2. f) *LOCATES AND USES INFORMATION
IN FUNCTIONAL READING*

2. LOCATION/RECALL
Functional Reading/
Prescription Label
4-12

3. Directions for taking medicine _____

4. Can the prescription be refilled? _____
5. Name of medication _____

Read the directions below and fill in the blanks with the total number of tablets to be taken each day:

1. 2 tabs 3 times a day for 3 days _____
2. 1 tab daily for four days _____
3. 2 tablets 2 times a day for two days _____
4. 1 capsule 2 times a day for 4 days _____

2. h) *LOCATES INFORMATION IN
A THESAURUS*

2. LOCATION/RECALL
Thesaurus
4-6

THESAURUS - A thesaurus can give you

Synonyms - words that mean *about the same*

or

Antonyms - words that mean the *opposite*

Use a thesaurus to find substitutes for the underlined words:

Dear Bobby Sherman,

We *like* your program very much. Our Bobby Sherman Club would like to *suggest* that some of the numbers could be less *loud*. Our folks don't *like* all that *noise*. We hope you won't *disappear* from the tube like so many other shows have.

Good luck.

The Funny Friends,

2. i) *LOCATES INFORMATION IN
A TELEPHONE DIRECTORY*

2. *LOCATION/RECALL*
Telephone Directory
3-12

"Each Maryland student who has achieved the objectives for reading established by the local school should . . .

4. *MEET THE READING DEMANDS FOR FUNCTIONING IN SOCIETY"*

Goal 4 from Reading Goals established by the State of Maryland, 1973. See page 39 for complete listing of state reading goals. See page 162 for description of State Basic Reading Mastery Test related to this goal.

The ability to use the telephone directory is considered to be a functional reading skill. This skill, as well as other functional reading skills listed in the Instructional Objectives of this comprehension guide, is included in the following inexpensive instructional and assessment materials.

(1) *Tutor Handbook*

Sixty sample lessons covering word recognition and comprehension. Each lesson includes easy-to-understand step-by-step suggestions. The lessons are appropriate for classroom teachers as well as tutors.

(2) *Problem Solving Exercises*

One hundred twenty assessment exercises (two for each of the sample lessons in Tutor Handbook).

Both of the above books were developed for the National Reading Center as part of 1776/Right to Read/1976. The books may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The following sample lesson and assessment tasks for using the telephone directory are from *Tutor Handbook* and *Problem Solving Exercises*:

Lesson 47¹⁶

Skill: Using a Telephone Directory

Objective: Given a telephone directory, the student will locate specific information in it.

Examine the local telephone directory with the student. Begin by having him locate telephone numbers and addresses of people he knows. Ask him to locate the addresses and telephone numbers of the stores in which he or his mother shops. Read names of individuals and names of commercial concerns to him, asking him to locate them in the phone book. He may do this by telling you whether

2. i) *LOCATES INFORMATION IN
A TELEPHONE DIRECTORY*

2. *LOCATION/RECALL*
Telephone Directory
3-12

or not they would be in the white or yellow pages. Prepare a worksheet for the student on which you ask him to locate specific information. For example, he might be asked to find the following information:

1. Doctor's phone number
2. Florist's phone number
3. Address for place selling autos
4. Number to call to make dinner reservations
5. Address of Mrs. Hess
6. Address of place repairing washing machines

Assessment Task 47¹⁷ (first example)

Objective: Given a telephone directory, the student will locate specific information in it.

Instructions: The tester will say: "Using this sample portion from a telephone directory, list numbers for the following places:"

1. Doctor's phone number
2. Florist's phone number
3. Address for place selling autos
4. Number to call to make dinner reservations
5. Address of Mrs. Hess

Hendon, Fred 123 W. Maple	223-9520
Henson's Autos 805 South	421-6718
Herands' Service Station 421 2d	213-4516
Herbert, Philip M.D. 213 5th	217-5406
Herman's Candies 91 South	213-0721
Hershey, Jane 100 Bush	314-4560
Hess, Mary Mrs. 30 Down	217-6821
Hess Flowers 12 Edward	325-1121
Hett's Restaurant 616 Lincoln	225-2330
Hewman, John 352 State	321-4133

Assessment Task 47¹⁷ (second example)

Objective: Asked to find information located in a telephone directory, the student will indicate whether it would appear in the classified or unclassified section.

Instructions: The tester will say: "Some of the telephone listings [that follow] would appear in the classified or yellow pages. Others would appear in the unclassified or white pages. Write 'white' or 'yellow' before each, depending upon which type of page [you think it should appear on.]"

2. i) **LOCATES INFORMATION IN
A TELEPHONE DIRECTORY**

2. **LOCATION/RECALL**
Telephone Directory
3-12

_____ moving and storage

_____ gift shops

_____ Winters, Donald E.

_____ Hunter, Maragret M.

_____ railroads

_____ Chester, David Dale

Telephone Directory Assistance

To obtain the distant area code

Area codes for some places are on call guide 11.

If the place you want is not listed, dial "O" (Operator).

To obtain distant telephone numbers

- Places in Maryland — Dial "1"+555-1212. Places outside Maryland — Dial "1" + the area code + 555-1212. Tell the operator the city or town, then the name or place you want.

- There is no charge for these directory assistance (information) calls.

If you reach a wrong number

- Dial "O" (Operator) immediately and tell her what happened.

- She will make sure you aren't charged for the call.

You will not be charged if

- You hang up before you dial the complete number.

- The telephone number you dial is busy or does not answer.

1. What should you do if you want to find the area code?

- | | |
|---------------------------|-----------------|
| a) Dial "O" | d) Both A and B |
| b) Dial "A" for area code | e) Both A and C |
| c) Look on call guide 11 | f) Both B and C |

2. If you reach a wrong number:

- a) Hang up and try again
- b) Tell the operator the town and place you want
- c) Look on call guide 11 for help
- d) Dial "O" and tell the operator what happened

3. You will not be charged if:

- a) The phone is out of order
- b) The number is busy
- c) Both A and B

2. j) **LOCATES INFORMATION IN
A TV GUIDE**

2. **LOCATION/RECALL**
TV Guide
3-6

1. Cut out a page from the weekly TV guide.
2. Fasten it in a manila folder or place it in a two-pocket folder.
3. On the opposite side of the folder, fasten a list of questions which may be answered by studying the TV guide page.
4. For a more difficult level, include the entire TV guide and develop a set of questions similar to those illustrated below.

This can be self-
checking. Include
answers on re-
verse side.

TV GUIDE

PURPOSE: To use the TV Guide

1. What show is on Channel 9 at 4 o'clock Sunday?
2. What movies are on TV on Tuesday?
3. "Temperatures Rising" is on Channel 7 on Tuesday. What time does it begin? What time is it over?
4. Look at the Sunday page. What fast clue do you see that tells you when you can watch a football game?
5. Look at the Saturday page. What fast clue do you see that tells you when you can watch a movie?

TV CH
The Washington



2. j) *LOCATES INFORMATION IN
A TIMETABLE*

2. LOCATION/RECALL
Timetable
4-6

Planning a Trip

- One student may be planning to go away for a visit.
- Another student may have recently been on a trip.
- All the students might have fun planning an imaginary trip.

Examine the timetables to ascertain

- what train (plane, bus) is best?
- how long will it take to make the entire trip?
- whether you stop along the way at other places?
- whether there is a waiting time at the stopovers?

Many interesting questions may be developed using the timetable information. What about other sources?

- Students might look up information about the cities they will visit.
- Students might look up information about the areas through which they will pass.

2. k) *LOCATES INFORMATION
IN AN ATLAS*

2. LOCATION/RECALL
Atlas
4-8

ATLAS

Select an *atlas* from your classroom or the media center, and complete the following questions while carefully examining the *atlas*.

AUTHOR _____

TITLE _____

PUBLISHER _____

PLACE OF PUBLICATION _____

COPYRIGHT DATE _____

2. k) *LOCATES INFORMATION
IN AN ATLAS*

2. LOCATION/RECALL
Atlas
4-8

WHAT KINDS OF MAPS DOES THIS ATLAS CONTAIN? _____

DOES THIS ATLAS HAVE AN INDEX? _____

DOES EACH MAP HAVE A LEGEND? _____

CAN YOU FIND THE GRAPHIC REPRESENTATION? _____

IS THERE A MAP IN THIS ATLAS USING PICTURE SYMBOLS? _____

IS THERE A SCALE SHOWING "INCHES TO THE MILE?" _____

FOR WHAT PURPOSE MIGHT YOU USE AN ATLAS? _____

2. k) **LOCATES INFORMATION
IN AN ATLAS**

2. **LOCATION/RECALL**
Atlas
4-8

Have an atlas or atlases available if this is to be played as a team game.

Directions for students

Look up answers to the following questions:

1. What is unique about the spelling of Pittsburgh? (gh spelling)
2. How many Portlands are there in the United States? In what states are they located? (Two — Maine and Oregon)
3. The boundary lines of what four states intersect at this point? (Arizona, Colorado, New Mexico, Utah)
4. What city in Ohio has the same name as:
 an explorer (Columbus)
 a city in Greece (Athens)
 a city in South America (Lima)
 a city in Spain (Toledo)
5. Where is the highest elevation in the U.S.? (Mount McKinley, Alaska)
6. Where is the lowest elevation in the U.S. (Death Valley, California)
7. What state is the geographic center of the U.S.? (South Dakota)
8. What state has the largest amount of rain? (Hawaii)
9. What state has the least amount of rain? (Nevada)
10. What was the heaviest one-day snowfall ever recorded in the U.S.A.? (60 inches at Giant Forest, California)
11. How old is the earth estimated to be? (at least 3 billion years)
12. What is the weight of the earth estimated to be? (6,6000, billion, billion tons)
13. What is the highest temperature ever recorded on earth? (136.4° F)
14. What is the lowest temperature ever recorded on earth? (-126.0° F)

2. k) *LOCATES INFORMATION
IN AN ATLAS*

2. LOCATION/RECALL
Atlas
4-8

Use an atlas to:

1. Find one (lake, sea . . .) for each category which begins with the letter in the left-hand box.
2. Find the appropriate information for the columns labeled Area, Height, and Length.

	LAKE	AREA	SEA	AREA	WATER FALL	HEIGHT	RIVER	LENGTH
A								
T								
L								
A								
S								

Note to teacher: Students may pick letters out of a hat instead of using the word ATLAS.

2. k) *LOCATES INFORMATION
IN AN ATLAS*

2. LOCATION/RECALL
Atlas
4-8

Use the index or gazetteer of an Atlas, or a geographical dictionary to find one of each of the items beginning with the letter in the box farthest to the left. Examples are found in the boxes opposite the second L.¹⁸

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

2. k) **LOCATES INFORMATION
IN AN ATLAS**

2. **LOCATION/RECALL**
Atlas
7-12

Use *Goode's World Atlas*¹⁹ to answer the following questions:

1. On what page will you find a climatic map of the World? What is the climate of Washington, D.C.? of Charleston, S.C.? of Nairobi, Kenya?
2. What map symbol is used to represent a caravan route? What symbol represents rapids in a river? How many of the rapids symbols can you find on the Nile River?
3. What is the natural vegetation that is found in the Amazon Basin?
4. Which of the following areas has a greater density of population?
 - a) North America or Europe
 - b) Japan or England
 - c) India or China
5. Where are the wheat growing areas of Africa? Which country is the largest wheat producer in South America?
6. To where is the greatest amount of Venezuela's oil exported? From where do the Europeans get most of their oil?
7. Across what ocean do the major ocean transportation routes appear to be?
8. Most of the products that are exported from the United States are of what type?
9. Most of the people of Northern Africa are of what religious faith?
10. Name the three longest rivers in the World.
11. Name the five largest countries in the World in area?
12. What ocean current is off the coast of Florida? Is it warm or cold?

2. l) **LOCATES INFORMATION
IN AN ALMANAC**

2. **LOCATION/RECALL**
Almanac
5-8

Using the *World Almanac and Book of Facts 1973 Edition*²⁰ answer the following questions:

1. Who is head of State of Algeria?
2. What is the longest river in Canada?
3. Identify the main heading under which one can find out information about the Temperature-Humidity Index.
4. What is the distance between Albany and Jackson, Mississippi?
5. Who was the National Spelling Bee Champion of 1971?
6. What day will your birthday be on in the year 2001?
7. What is the address of the National Dairy Council?
8. Give the schedule of fees for copyright.
9. What is the most recent population figure for Cook County, Illinois?
10. What is the life-expectancy of people living in Chad?

2. l) **LOCATES INFORMATION
IN AN ALMANAC**

2. **LOCATION/RECALL**
Almanac
5-8

Use *The World Almanac and Book of Facts 1973 Edition*,²¹ to locate the following information:

1. What was the 1971 population of the protectorate of Sikkim?
2. On what day of 1904 did the New York subway open?
3. How many home runs did Ted Williams hit in his lifetime?
4. In what year did Jean Harlow die?
5. In what Florida city is Manatee Junior College?
6. What was the 1970 population of the Washington, D.C., Standard Metropolitan Statistical Area?
7. What is the area of Montgomery County, Maryland? What was the county's population in 1970?
8. What was the 1968 National Income of the Tobacco Manufacturers?
9. For whom was the State of Maryland named?
10. How deep is the Ob Trench in the Indian Ocean?

Check your answers here:

- | | |
|---------------|--------------------------------|
| 1. 200,000 | 6. 2,861,123 |
| 2. October 27 | 7. 495 square miles
522,809 |
| 3. 521 | 8. \$1,359,000,000 |
| 4. 1937 | 9. Queen Mary I of England |
| 5. Bradenton | 10. 22,553 feet |

2. m) **LOCATES INFORMATION
IN MAGAZINES**

2. **LOCATION/RECALL**
Magazines
K-6

Students should be introduced to various magazines in the classroom, with emphasis on the type of content each one features such as history, geography, nature, fiction, poems, current events. When possible, the use of magazines should be correlated with regular classwork, to amplify or bring up to date information available from textbooks and other reference words. When students already know how to use the table of contents in a book, this skill may be related to using the table of contents to locate material in magazines. Encourage the students to skim through a magazine article to determine whether it is of interest or pertinent to the subject they are researching. When they have decided that the article is one they may find interesting or useful, they will then read it more carefully for detail.

2. m) *LOCATES INFORMATION
IN MAGAZINES*

2. *LOCATION/RECALL
Magazines
K-6*

If a number of magazines are available in the classroom or in the library, the teacher may list various topics and ask the student to determine in which magazines they might find articles giving information on these topics. For example:

Adventure
Animals
Birds
Cars
Coin collecting
Crafts
Current children's literature
Drama
Fun
Geographic areas
Occupations
Poems
Puzzles
Sea life
Stories

Boys' Life
Children's Digest
Coins
Cricket
Highlights
Hot Rod
Humpty Dumpty
Jack and Jill
Kids
National Geographic
Pack-O-Fun
Plays
Ranger Rick
Sea Frontier
World Traveler

2. *LOCATION/RECALL
Magazines
3-6*

AN INDEPENDENT ACTIVITY

1. Put into a folder several kinds of magazines which are appropriate to students' levels such as *Coins, Highlights, Plays, Jack and Jill*.
2. Fasten directions to the folder, such as:

Purpose: To find information in a magazine

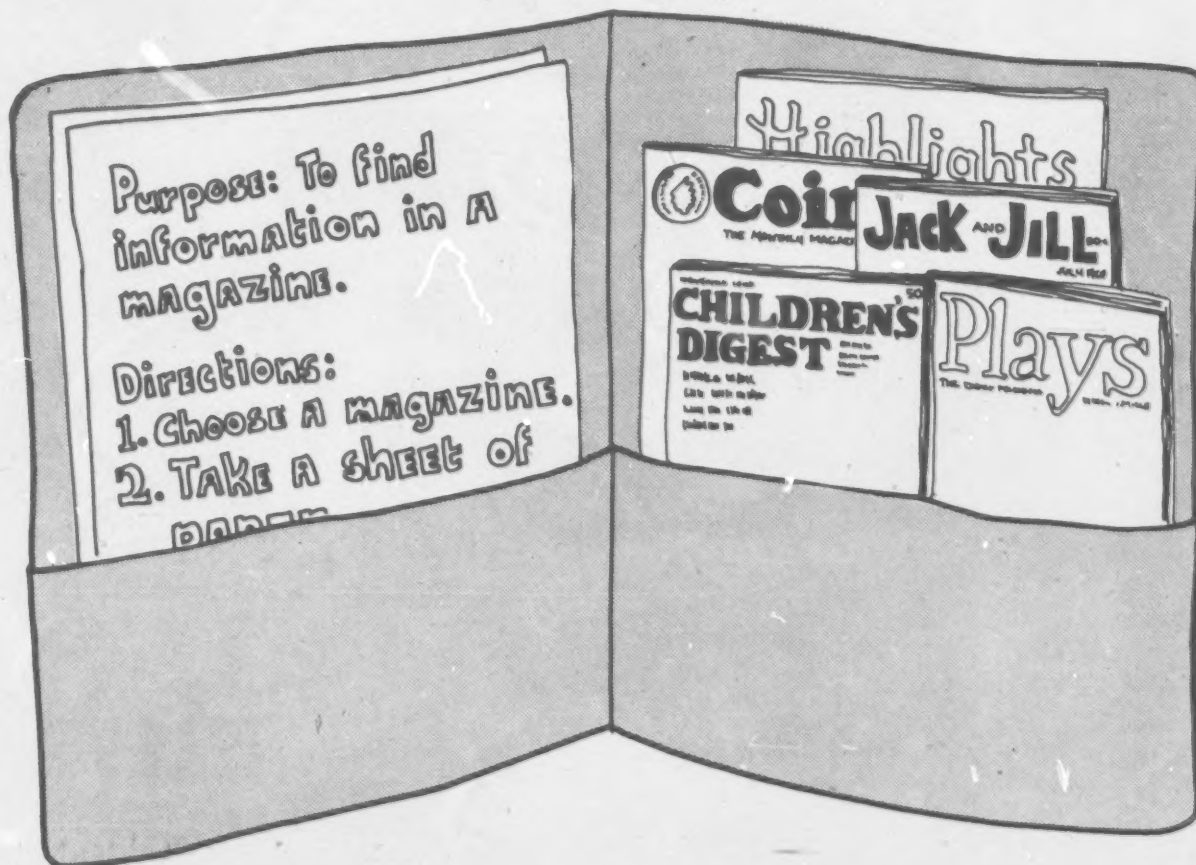
Directions:

- I. Choose a magazine.
- II. Take a sheet of paper.
- III. Answer the following questions:
 - A. What is the *name* of the magazine you chose?
 - B. What is the *date* of the magazine you chose?
 - C. Does the magazine have a Table of Contents? What page is it on?

2. m) LOCATES INFORMATION
IN MAGAZINES

2. LOCATION/RECALL
Magazines
3-6

- D. Which article looks most interesting to you?
E. Read the article. Write four interesting things you found.



2. m) *LOCATES INFORMATION IN A
MAGAZINE, PAMPHLET, OR
BROCHURE*

2. *LOCATION/RECALL*
Travel Brochures, Timetables
4-6

SEEING THE WORLD

In studying a section of the United States in social studies, have the students write to the various state or city travel bureaus or Chambers of Commerce for brochures. Make a list of the different cities or states students choose to visit on a particular imaginary trip. Appoint ticket agents to represent each city. Each agent is provided with a number of questions which students must read and answer before they can "board" the train or boat or plane that will take them to their destination.

This activity can be used along with timetable information to focus on the objective 2. j) Locates information in a timetable.

Skills such as these would probably not be taught in isolation merely as locating skills, but rather would be taught in the context of a problem such as the one described above — that of planning a trip. This would more than likely put the activity at the level of problem-solving (Application, Category 6). However, as has been stated throughout this bulletin, there is no clearcut dividing line between these thinking skills. The higher levels of thinking include those on lower levels; and in an actual classroom situation, most activities would make use of many kinds of thinking at once rather than being directed at one area in isolation.

2. *LOCATION/RECALL*
Miscellaneous Publications
9-12

The Work Oriented Curriculum Courses of Study, Grade 9, Phase I, and Grade 10, Phase II, suggest the following sources of factual information for WOC students.

Work permit applications

Want ad section of the daily newspaper

Brochures and pamphlets published by the U.S. Department of Labor and large corporations, describing jobs and job requirements

Material from the Maryland State Employment Security Office and the U.S. Social Security Administration

Dictionary of Occupational Titles

SRA "Widening Occupational Roles" Kit (Chicago: Science Research Associates, 1962)

WOC Job Evaluation forms

Training materials supplied by business firms

Booklet *You and the Telephone*

2. n) *LOCATES AND USES INFORMATION
IN AN ADVERTISEMENT*

2. **LOCATION/RECALL**
Advertisement
4-8

Source: State of Maryland "Guidelines"*

RED HOT DEALS	
All Cars State Inspected	
'67 Pontiac LeMans	\$1495
'68 Pontiac LeMans	\$1895
'67 Camaro H T	\$1295
'66 Comet Sedan	\$ 795
'69 Olds Cutlass H T	\$1495
'68 Plym Fury Sedan	\$1095
'65 VW Bug	\$ 895
'69 VW Bug	\$1395

1. What is the difference in years of the two cars selling for \$1495?
 - a) 1 year
 - b) 2 years
 - c) 3 years
 - d) 4 years
2. What is the difference in cost between a '67 and '68 Pontiac LeMans?
 - a) \$200
 - b) \$300
 - c) \$550
 - d) \$400

*"Guidelines for Refining Existing Reading Programs in Maryland to Insure that Students Meet the Reading Demands for Functioning in Society," July 1973.

2. n) *LOCATES INFORMATION
IN A CATALOG*

2. *LOCATION/RECALL*
Catalog
48

Source: State of Maryland "Guidelines"*

Pianos	545	Sporting Goods	490
Plumbing Goods	648	Tableclothes	898
Ranges, Stoves	767	Tableware	756
Refrigerators	780	Tires, Tubes	439
Sewing Machines	282	TV, Radios, Stereos	825
Shades, Blinds	1008	Vases	774
Shelving	798	Washers, Dryers	793
Shoes, Boots	306	Watches	161
Slipcovers	990		

1. Which items are found on page 780?
 - a) slipcovers
 - b) tableware
 - c) refrigerators
2. On what page are watches found?
 - a) 793
 - b) 161
 - c) 490
3. On what page might you look to find a set of dishes?
 - a) 825
 - b) 898
 - c) 756

*"Guidelines for Refining Existing Reading Programs in Maryland to Insure that Students Meet the Reading Demands for Functioning in Society," July 1973.

2. o) *LOCATES INFORMATION IN
A CONCERT PROGRAM*

2. *LOCATION/RECALL
Concert Program
4-12*

Below is some "copy" from a program of a performance at Wolf Trap Farm. Answer the following questions, using the information found in the program:

Filene Center/Wolf Trap Farm Park for the Performing Arts	
GALA OPENING CONCERT	
Friday Evening, June 15, at 8:30	
THE CHICAGO SYMPHONY ORCHESTRA	
Sir Georg Solti, Music Director	
Henry Mazer, Associate Conductor	
Carlo Maria Giulini, Guest Conductor	
Rossini	Overture to <i>Semiramide</i>
Debussy	<i>La Mer</i>
INTERMISSION	
Brahms	Symphony No. 4, E Minor, Opus 98
Ceremonial Prelude UNITED STATES MARINE BAND Lt. Col. Dale Harpham, Director	
The use of cameras and any kind of recording equipment during performances at Filene Center is strictly prohibited.	

- a) What group was performing? _____
- b) When were they performing?
- Day of the week? _____
- Date? _____
- Time? _____ A.M. or P.M.? _____
- c) Who was the conductor? _____
- d) What were two of the pieces performed?
- _____
- _____
- e) Are cameras and recordings permitted? _____
- f) Was there any other musical group performing? No _____ Yes _____
- If yes, name the group. _____

2. p) *USES MEDIA CENTER GUIDE*

2. LOCATION/RECALL
Media Center Guides
4-8

FINDING THE LETTER CODE FOR AUDIO-VISUALS

Our Media Center contains many materials besides books. The materials that are not books are called audio-visuals. The card catalog uses a letter code for audio-visuals. The letter code is written above the call number on the card in the catalog.

Directions — In Column B, write the letter code for the materials listed in Column A. The first one has been done for you as an example.

A	B
(Kind of Material)	(Letter Code)
Filmstrip	<u>FS</u>
Record	<u> </u>
Transparency	<u> </u>
Filmloop	<u> </u>
Slide	<u> </u>
Kit	<u> </u>
Chart	<u> </u>

2. p) (1) *USES CARD OR BOOK
CATALOG*

2. LOCATION/RECALL
Catalog/Media Center
4-12

Have a student look up any subject of personal interest in the *Montgomery County Department of Public Libraries Subject Catalog*²² The student may then locate the nearest branch library from which to check out books on that subject.

The same type of activity can be done using the Author and Title catalogs. These catalogs are available in the media center of your school as well as in the public library.

Have a student select films listed in the *Montgomery County Educational Film Catalog*²³ that might be used to accompany a unit that is currently being studied or will be studied soon. The names of selected films may be given to the film coordinator for your school for ordering. The film catalog is located in the media center of your school.

2. p) (2) *USES PERIODICAL OR
MAGAZINE INDEX*

2. *LOCATION/RECALL*
Index/Media Center
4-12

Using the *National Geographic Index*,²⁴ locate the issue and pages of an article in *National Geographic* about the following:

1. Backpacking
2. Headhunting
3. Fiords
4. John F. Kennedy International Airport
5. Hoxie Brothers Gigantic 3-Ring Circus

2. p) *USES MEDIA CENTER GUIDES*

2. p) (1) *USES CARD OR BOOK CATALOG*

2. p) (2) *USES PERIODICAL OR MAGAZINE INDEX*

2. **LOCATION/RECALL**
Media Center Guides
4-6

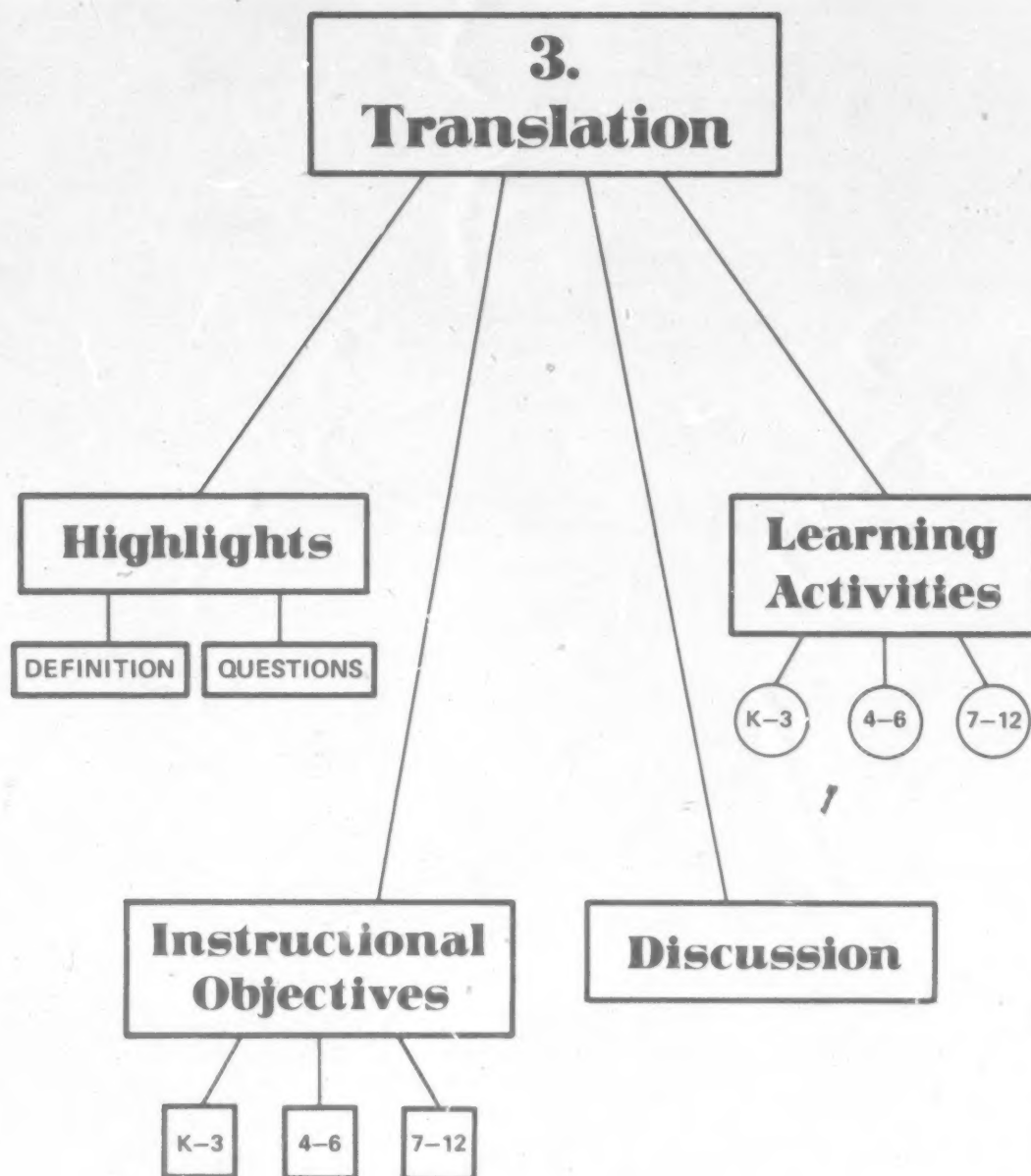
Use the card catalog in the IMC or the Montgomery County Public Library Children's Book Catalog to find the information suggested by the headings below. The information required *must* begin with the letter beginning each line in the left-hand column.

	FICTION BOOK (Title)	SCIENCE BOOK (Title)	A FILMSTRIP ON A SUBJECT THAT BEGINS WITH:	AN AUTHOR'S LAST NAME	A PICTURE BOOK
C					
A					
T					
A					
L					
O					
G					

FOOTNOTES

1. "Memory" from *WORDS WORDS WORDS* by Mary O'Neill. Copyright © 1966 by Mary O'Neill, p. 37. Reprinted by permission of Doubleday & Company, Inc.
2. Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper & Row, Inc., 1966), p. 27.
3. *Ibid.*, p. 28.
4. Francis P. Robinson, *Effective Study* (New York: Harper & Row, 1970).
5. From the book *Developing a Successful Elementary School Media Center* by Lillian Glogau, Edmund Krause, and Miriam Wexler. © 1972 by Parker Publishing Co., Inc., West Nyack, New York and used with their permission, p. 107.
6. John Holt, *The Underachieving School* (New York: Pitman Publishing Corporation, 1969), pp. 82-83.
7. Mary E. Platts, *Anchor* (Stevensville, Mich.: Educational Service, Inc., 1970), p. 102.
8. From *Practice in Library Skills*, p. 13. Printed with permission of the publisher, The Instructor Publications, Inc., Dansville, New York 14437.
9. *The World Book Encyclopedia, Vol. 22: Research Guide/Index* (Chicago: Field Enterprises Educational Corporation, 1973).
10. *Our Wonderful World* (New York: Grolier, Inc., 1971).
11. *Know Your Encyclopaedia in Seven Simple Steps* (Chicago: Encyclopaedia Britannica Corporation, 1971).
12. Reading Goals established by the State of Maryland, 1973.
13. Robert M. Wilson and Marcia M. Barnes, *Survival Learning Materials* (College Park, Maryland: Reading Center, College of Education, University of Maryland, 1973).
14. Robert M. Wilson and MaryAnne Hall, *Reading and the Elementary School Child* (New York: Van Nostrand Reinhold Co., 1972).
15. Wilson and Barnes, *Survival Learning Materials*, pp. 51-54.
16. *Tutor Handbook*, National Reading Center, Washington, D.C., p. 61.
17. *Problem Solving Exercises*, National Reading Center, (no page number).
18. From the book, *Developing a Successful Elementary School Media Center* by Lillian Glogau, Edmund Krause, and Miriam Wexler. © 1972 by Parker Publishing Co., Inc., West Nyack, New York and used with their permission, p. 164.

19. Edward B. Espenshade, Jr. (ed.), *Goode's World Atlas*, 13th edition (Chicago: Rand McNally & Co., 1971).
20. George E. Delury (ed.), *The World Almanac and Book of Facts*, 1973 edition (New York: Newspaper Enterprise Association, Inc., 1973).
21. *Ibid.*
22. *Montgomery County Department of Public Libraries Subject Catalog* (Rockville, Md.: Montgomery County Department of Public Libraries, 1972).
23. MCPS, *Educational Films*, 1972 Catalog, Supplement II (Rockville, Md.: Montgomery County Public Schools, 1973).
24. *National Geographic Index*, Volume 141, January-June 1972 (Washington, D.C.: National Geographic Society).



3. TRANSLATION Highlights

3. TRANSLATES A COMMUNICATION INTO A DIFFERENT FORM, DIFFERENT LANGUAGE, OR DIFFERENT LEVEL OF ABSTRACTION

- Changing information into some *parallel form*
 - Change may be:
 - into a briefer form
 - into an extended form
 - from verbal to symbolic
 - from symbolic to verbal
 - from concrete to abstract
 - from abstract to concrete
- The specific meaning remains the same; the way of *expressing* that meaning is changed.

What does this traffic symbol mean?

The directions ask that you _____ first.

In what way(s) can you _____ this
(illustrate, chart, diagram)
information?

How can this paragraph be simplified,
still retaining the intended message?

Can you suggest several ways of summarizing this article?

Instructional Objectives

TRANSLATION

3. *TRANSLATES A COMMUNICATION INTO A DIFFERENT FORM, DIFFERENT LANGUAGE, OR DIFFERENT LEVEL OF ABSTRACTION*

a) Translates from verbal form to pictorial or diagrammatic form, and vice versa

- (1) Draws a picture from verbal information
- (2) Describes pictures, cartoons, comic strips, pictorial sequences
- (3) Constructs a map from verbal information
- (4) Explains semi-pictorial and abstract symbols (e.g., map, traffic)
- (5) Constructs a graph, diagram, chart, or three-dimensional model from verbal information
- (6) Explains information shown in graphs, diagrams, charts, schedules, tables, and three-dimensional models

b) Translates directions into action or a product

- (1) Performs a task in response to directions
 - (a) One step
 - (b) More than one step
- (2) Prepares food from a recipe
- (3) Constructs an article from directions and/or a pattern
- (4) Fills out forms (e.g., library card, mail order form, job application, driver's license)

c) Translates from verbal form to another verbal form or to kinesics (body language)

- (1) Dramatizes, role-plays, or pantomimes
- (2) Translates literary, idiomatic, geographic, cultural, or occupational dialect into own personal (standard or nonstandard) dialect

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*

Instructional Objectives

TRANSLATION (continued)

Suggested Instructional Level

	K-3	4-6	7-12
(3) Translates figurative language into literal language			
(a) Explains fable, proverb, or parable in terms of moral principle	*	*	*
(b) Explains figures of speech		*	*
d) Translates from one level of abstraction to another			
(1) States in own words or paraphrases	*	*	*
(2) Gives an example or illustration	*	*	*
(3) Summarizes		*	*

3. TRANSLATION Discussion

Ideas may be expressed in many ways. Translation behaviors are those which change a communication from one form to another (for example, from pictorial form to verbal form); from one verbal form to another verbal form (for example, from figurative to literal language); or from one level of abstraction to another (for example, summarizing). In reading a map, for instance, a pupil must change the lines, the colors, and the symbols on the map into vivid mental images of boundaries, rivers, elevations, and numbers of people living in the cities shown on the map. These mental images can be expressed in words that provide almost the same information as the map does.

Translation does not enlarge upon the meaning of the communication. It does not require the discovering of unstated relationships, implications, or generalizations; such behaviors would fall into the next category, Interpretation. For example, if a student replicates a science demonstration or experiment described and explained in a science text, this would be considered translation. If the activity involves the student in drawing conclusions or speculating about the results of the experiment or what might happen in further experimentation, the thinking goes beyond Translation into Interpretation and Prediction.

"It is not necessary to build a guillotine in order to understand the part it played in the French Revolution."¹ This statement suggests a caution in asking students to translate ideas. How important are the ideas to which the student is reacting? In other words, the actual mechanics of changing information into some parallel form should not be out of proportion to the importance of the information. In addition, the accuracy of the ideas needs to receive emphasis when information is translated. For example, if a student is required to draw a picture to represent ideas expressed in writing, the accuracy of the portrayal of the ideas is important, not the quality of the art.

3. a) (1) DRAWS A PICTURE FROM VERBAL INFORMATION

3. TRANSLATION Pictures K-3

ILLUSTRATING SENTENCES. Write a sentence which is appropriate. The child is to illustrate the sentence.

Father is working in the yard.	Four boys are playing football.
These children are having a party.	The teacher is doing her work.

3. a) (1) **DRAWS A PICTURE FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Pictures
K-6

Source: *MCPS ELA Bulletin No. 185*

Grade K: *Emily Emerson's Moon* Page K-3

Draw a picture of the part of the story you like best.

Grade 1: *Make Way for Ducklings* Page I-9

After observing and discussing animals, make sketches of them.

Grade 2: *Down, Down the Mountain* Page II-3

Draw scenes suggested by the story and write a sentence under each picture.

Grade 3: *Owls in the Family* Page III-17

Make a mural about various episodes in WOL's life.

Grade 4: *Many Moons* Page IV-17

Draw scenes for a bulletin board display, putting them in sequence.

Grade 5: *Queenie Peavy* Page V-20

Draw additional black and white illustrations of major incidents similar in style to those already in the book.

Grade 6: *Mine for Keeps* Page VI-52

Illustrate vivid descriptive passages (e.g., of Sally's room, of Libby, of the children's Halloween costumes, of the puppy in the first snow).

3. **TRANSLATION**
Pictures
2-6

The following is from *MCPS Elementary Social Studies Curriculum Illustrative Units (K-3)*

Grade 2: "We Look at Our Community"

(p. 97) Plan and make mural showing the special places in which to learn in our community.

3. a) (1) **DRAWS A PICTURE FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Pictures
2-6

(p. 99) Mark a series of pictures to show what the children have learned about how people have fun in the community.

Grade 3: "Living in Hot, Wet Regions: A Tropical African Village"

(p. 123) Paint a mural depicting village life. Show jungle in background, clearing for village and garden homes, river with dugouts, people at work or play.

Draw or paint pictures showing the interior of a village home and inspired by the jungle, travel, and hunting.

(p. 127) Draw pictures to show the different kinds of work done by different people or agencies.

Grade 4: "Across the Ocean to the New Land"

(p. 5) Prepare a series of drawings to show development of sailing vessels from about year 1000 to 1450.

(p. 8) Make an illustrated list of new foods, people, customs, and housing which were brought to the New World by the explorers.

Grade 5: "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

(p. 91) Make a list of kinds of work identified in pictures. Select pictures or make drawings to accompany. A more complete list and sets of pictures or drawings may be worked on as more is learned about work activities.

Grade 6: "Contributions of the Giants of the Renaissance"

(p. 140) Begin or continue an illustrated time line which will show major events of the Renaissance.

3. **TRANSLATION**
Pictures
7-12

As one kind of translation question, a student may be asked to draw a picture or diagram of an idea or sequence of ideas he has read about, using stick figures. Examples might be the process by which Congress enacts a bill into law or an industrial process such as coal mining. Such a picture should be judged on how well it translates the idea and demonstrates insight into the concept or sequence of ideas read about, not on the quality of the art work. Also, if the student is asked to produce such a drawing from memory of one he has seen in a textbook, then the question becomes a memory question and not a test of translation behavior.

3. a) (2) *DESCRIBES PICTURES AND
CARTOONS*

3. **TRANSLATION**
Pictures
K-3

At the simplest level, students may be presented with a picture and asked what is going on in the picture or what it shows.

To reverse the process the student may be given a short oral or written factual description and asked to select the picture it describes from a variety of pictures displayed.

3. a) (2) *DESCRIBES PICTURES, CAR-
TOONS, COMIC STRIPS, PIC-
TORIAL SEQUENCES*

3. **TRANSLATION**
Descriptions/Pictorial
4-6

Source: *MCPS Elementary Social Studies Curriculum Illustrative Units (4-6)*

Grade 4: "Across the Ocean to the New Land"

(p. 8) Plan and produce a homemade filmstrip, a series of glass slides, or a mural to tell the story of "Across the Ocean to New Lands."

This production should explain why settlers selected each general location.

Grade 5: "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

(p. 94) Use many sources to locate pictures of Alaskan landscapes.

Discuss and record (list, chart, etc.) impressions of the area and kinds of physical features.

Use the film *Alaska* (F192) to help students gain a stronger visual image and concept of Alaska's physical features.

Engage in a discussion of the film.

Grade 6: "Contributions of the Giants of the Renaissance"

(p. 140) Collect pictures of Renaissance Venice, Genoa, and Florence. Discuss in detail, with facts observed in the pictures, how the pictures show some of the wealth of these former city states.

3. a) (3) **CONSTRUCTS A MAP FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Maps
K-6

In providing students with a beginning experience with maps, the teacher may ask that a simple map of the classroom be made by marking the positions of each desk with tape on the floor, then moving the desks and demonstrating that as the tape is a symbol for the desks, the desks can be moved back to their original location. A simple map of the school or a store or place that the students visit on a field trip could also be laid out with tape and blocks on the classroom floor.

As students are introduced to semi-pictorial map symbols (such as the symbol for railroad tracks) which suggest the thing they represent, they may enjoy making a map of their community. Sections of area maps that show the location of schools can be blown up very large, using an opaque or overhead projector; and the street plan of the community in which the students live can be traced off on a large sheet of paper. Discuss the use of semi-pictorial symbols, and let students decide what symbols they will use to represent their homes (for example, a small construction paper house shape), and what will represent other important features of their community such as the school, churches and temples, stores, and railroad tracks. Each student cuts out and pastes the house symbol at the location of his/her own home on the map. A map key explaining the use of the symbols is added to complete the map.

In map activities, discuss with the students how much written text would have to be read to get the same ideas that are presented quickly and clearly using symbols on a map. (See social studies courses of study for suggestions on map making.)

3. **TRANSLATION**
Maps
2-3

The following examples are taken from *MCPS Elementary Social Studies Curriculum Illustrative Units (K-3)*

Grade 2: "We Look at Our Community"

(p. 94) Construct a large floor map that will grow as the study of the community progresses. The map may be started on a large roll of paper and expanded as the students learn different things about their community. Trees, buildings, and other features may be cut from paper and pasted along street patterns constructed by teacher before class period. Symbols can also be made from small boxes and cartons or represented by blocks of wood. The school and street pattern of its immediate area should be put on the map first.

(p. 98) Develop and place symbols on the floor map to represent building or construction being carried out.

3. a) (3) **CONSTRUCTS A MAP FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Maps
2-3

Grade 3: "Living in Hot-Wet Regions: A Tropical African Village"

(p. 122) Make a large map of Africa showing the equator, the Congo Basin boundaries, and the Congo river with its tributaries. Place the village of Wamba and the cities of Stanleyville and Leopoldville on the map.

(p. 123) Make picture maps of Africa showing native plants and animals.

3. **TRANSLATION**
Maps
4-6

Source: *MCPS Social Studies Illustrative Units (4-6)*

Grade 4: "Across the Ocean to the New Land"

(p. 6) Begin an outline map of the world on which routes of the explorers may be shown. A color key might be used to indicate claims of various countries of the new world.

(p. 7) Add explorers' routes and countries' land claims to the map previously begun.

Grade 5: "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

(p. 15) Begin a large map of Alaska on which information about ways of making a living may be indicated by using different symbols, color, shading.

(pp. 97-99) Make an outline map of Alaska and locate fishing grounds. Add location of canning and freezing plants. Add location of mineral resources to map. Add location of fur-bearing animals.

Grade 6: "Feudalism Preserves Western Culture"

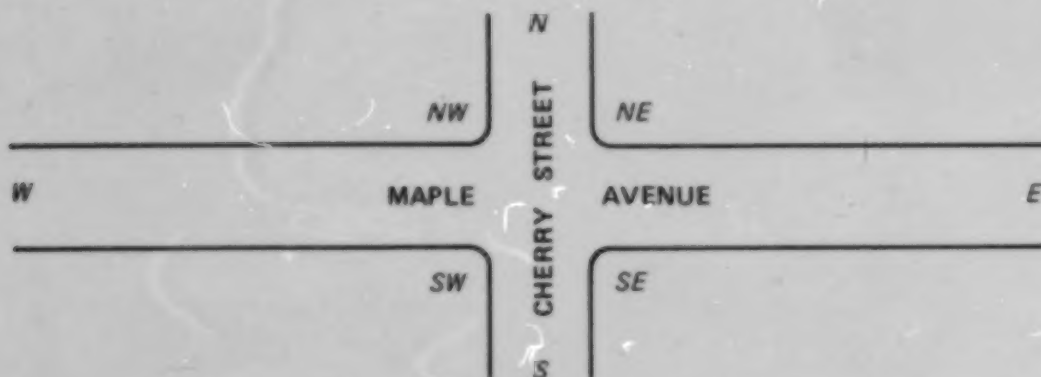
(p. 136) Pretend you are going to join one of the Crusades to the Holy Land. Reproduce a map showing the route you will take.

3. a) (3) **CONSTRUCTS A MAP FROM
VERBAL INFORMATION**
3. b) (1) **PERFORMS A TASK IN RE-
SPONSE TO DIRECTIONS**

3. **TRANSLATION**
Maps
4-6

MAP FUN.

Draw on the blackboard a map, similar to that shown below. Under it, list the directions, adapting the vocabulary to your particular grade level. Example:



Directions:

1. There is a Safeway store on the southeast corner of the intersection of Cherry Street and Maple Avenue. Write the word Safeway on this corner.
2. There is a park on Cherry Street. It is located near the northwest corner. Draw a square to represent the park, and write the word park under the square.
3. The YMCA is across the street from the park. Draw a circle to represent the "Y."
4. Jim lives on Maple Avenue close to the southwest corner. Draw this symbol () to represent his house.
5. Jim goes to the store for his Mother. Draw a broken line (-----) to show the way he goes from his house to the store.
6. Is the "Y" east or west of the park?
7. Is the park north or south of Jim's house?

3. a) (3) **CONSTRUCTS A MAP FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Maps
1-4

Source: MCPS ELA Bulletin No. 185

Grade 1: Page 1-15, *The Camel Who Took a Walk*

Find countries or places on the map or globe where this story could have occurred.

Grade 1: Page 1-23, *The Story About Ping*

Use the globe to find China.

Grade 4: Page IV-12, *Ginger Pye*

Make an illustrated map of the town of Cranbury, showing:

- Spruce Street intersecting Second Street
- East Rock with the Giant Steps
- West Rock with Judges' Cave
- Elm Street intersecting New Dollar Street with skeleton houses and the brick lot
- Beam's Place
- Church

Page IV-17, *Mr. Popper's Penguins*

Chart the penguin's journey from the South Pole to Stillwater.

Page IV-27, *Paul Bunyan Swings His Axe*

Make a picture map showing location of Paul's deeds.

Page IV-32, *The Empty Schoolhouse*

Draw a picture map of French Junction, if it will help clarify relationships in the story.

3. **TRANSLATION**
Maps
5-6

Source: MCPS ELA Bulletin No. 185

Grade 5, Page V-5: *Rasmus and the Vagabond*

Students might draw a bird's-eye view of the deserted sea town in which the chase takes place. Arrows or dotted lines could trace the progress of the chase in, out, back and forth as it is described in the book.

3. a) (3) **CONSTRUCTS A MAP FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Maps
5-6

Grade 5, Page V-30: *This Dear-Bought Land*

Construct a map showing the ship's journey from England to Jamestown.

Grade 6, Page VI-4: *Daniel Boone*

Design pictorial maps of Boone's adventures. (Study the end papers of Dougherty's book.)

Grade 6, Page VI-14: *Island of the Blue Dolphins*

Draw a map to scale including Aleutian Islands, Russia, California, and off-shore islands. Show routes taken by the Aleutian sea-otter hunters and by white men. Include latitude lines. Locate the island.

Grade 6, Page VI-51: *The 21 Balloons*

Trace the general course of the aerial life raft on a map. Make a pictorial map of Krakatoa.

3. **TRANSLATION**
Maps
5-12

NEWSMAP

Have groups of students or individuals prepare a fairly large outline map of the World. Assign each group member a day of the week to search for articles on important news events of the day. These news events should be categorized such as natural disasters, battles, plane or train accidents, epidemics, assassinations, changes in government, scientific discoveries, etc. Assign each category a colored symbol. Each day the assigned student should briefly inform the class of the important news events and then properly code these events on the map and date them.

3. a) (3) **CONSTRUCTS A MAP FROM
VERBAL INFORMATION**
3. b) (1) **PERFORMS A TASK IN RE-
SPONSE TO DIRECTIONS**

3. TRANSLATION
Maps
4-7

DRAWING A MAP

Follow directions:

1. On your paper, use the letter N for north, S for south, E for east, and W for west. Place these letters where you would find them on a map.
2. Between west and east, there is a street. Draw two parallel lines, about an inch apart, running from west to east.
3. On the north side of this street, the traffic moves west. Using arrows, show the direction of the traffic on the north side of the street.
4. On the south side of the street, the traffic moves west to east. Using arrows, show the way the traffic moves.
5. There is a city park on the south side of the street. Write *park* in this area.
6. There are five houses on the north side of the street. Use a symbol of your own choosing to represent the houses.

3. a) (3) **CONSTRUCTS A MAP FROM
VERBAL INFORMATION**
3. a) (5) **CONSTRUCTS A CHART FROM
VERBAL INFORMATION**

3. TRANSLATION
Maps and Charts
9-12

One of the objectives of the Work Oriented Curriculum (WOC) for Grade 9 is the development of student awareness and knowledge of the business community in which he/she will become a worker during a particular job experience. The 9th Grade Course of Study for WOC contains suggestions for drawing up a simple map of the community, showing features the WOC student will need to know, and for discussing the various features of maps. The course of study also suggests that students make a chart showing large and small business hiring practices.

3. a) (4) **EXPLAINS MAP SYMBOLS**
(SEMI-PICTORIAL AND
ABSTRACT)

3. **TRANSLATION**
Map Symbols
4-6

Source: MCPS Elementary Social Studies Curriculum Illustrative Units (4-6)

Grade 4: "Across the Ocean to the New Land"

(p. 4) Use a map or globe to locate Europe and the Far East and to trace routes used by the travelers.

Grade 5: "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

(p. 94) Read and interpret symbols on a physical map to locate Alaska and to identify its outstanding physical features.

(p. 95) Use maps and globes to locate Alaska by finding correct latitudes. Note proximity to Arctic Circle to predict climate. (Also see Prediction, category 5, p.)

(p. 99) Read a variety of maps and use scale of miles to determine distances in making imaginary trip.

Grade 6: "Feudalism Preserves Western Culture"

(p. 136) Study a map showing the routes of the Crusades. Use a scale of miles to determine the length of the route that one group of the Crusaders took. How long might the trip have taken?

3. **TRANSLATION**
Map Symbols
5-8

Use the map on the following page to complete this exercise of identifying map symbols.

1. Which map symbol would be a capital city?
2. Which symbol would show battlefields?
3. Which symbol would show the boundary between states?
4. Which symbol would show seashore resorts?
5. ☉ and ○ both represent cities. Which symbol would represent the larger city?
6. Which symbol would represent mountain peaks?

3. a) (4) EXPLAINS MAP SYMBOLS

3. TRANSLATION

Map Symbols
5-8



3. a) (4) **EXPLAINS MAP SYMBOLS**
(SEMI-PICTORIAL AND
ABSTRACT)

3. **TRANSLATION**
Map Symbols
5-8

7. Which symbol would locate national parks?
8. In what sections of Maryland and Virginia would swamps be found?
9. Near what sections of Maryland, Delaware, and Virginia would seaports be located?
10. Three mountain passes are shown on the maps. Locate them.

☐
☐
☐

3. a) (5) **CONSTRUCTS A CHART FROM**
VERBAL INFORMATION

3. **TRANSLATION**
Charts
K-3

3. a) (6) **EXPLAINS INFORMATION**
SHOWN IN CHARTS

For an example of an activity for primary children involving translation of symbols on a weather chart, see *MCPS Teaching Reading Skills, Part I*, p. A-1.

3. a) (5) **CONSTRUCTS A GRAPH, DIA-**
GRAM, CHART, OR THREE-
DIMENSIONAL MODEL FROM
VERBAL INFORMATION

3. **TRANSLATION**
Construction
2-3

Source: *MCPS Elementary Social Studies Curriculum Illustrative Units (K-3)*

Grade 2: "We Look at Our Community"

(p. 94) Develop a vocabulary chart of things seen, such as flat places, rough places, hills, steep banks, ditch, gully, terrace, swings, seesaws, buildings, walks, driveways, blacktops.

(p. 99) Plan a model community in a sand table or with blocks to show recreation areas.

Grade 3: "Living in Hot-Wet Regions: A Tropical African Village"

(p. 122) Construct a table-top scene of a Congo village showing homes, gardens, jungle background, people at work, river with dugouts.

3. a) (5) **CONSTRUCTS A GRAPH, DIAGRAM, CHART, OR THREE-DIMENSIONAL MODEL FROM VERBAL INFORMATION**

3. **TRANSLATION**
Construction
2-3

(p. 125) Make dioramas or friezes of events that might take place in the village.

(p. 122) Make illustrated charts listing (1) native plants that can be used for food; (2) crops that can be grown for food; (3) land animals that can be used for food; and (4) water animals that can be used for food.

(p. 127) Make a list of the tools being used, and separate them into those which are primitive and those which are modern.

3. **TRANSLATION**
Construction
4-6

Source: *MCPS Elementary Social Studies Curriculum Illustrative Units (4-6)*

Grade 4: "Across the Ocean to the New Lands"

(p. 7) Make a chart of the age of exploration and discovery. Include headings such as:

Explorer
Country Represented
Voyage
Route and Date
Results of Voyage

Information may be added as the study progresses.

Grade 5: "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

(p. 91) Make a working model of a volcano.

(pp. 94-95) Make a series of drawings on 5x8 cards or glass slides to depict climate in various sections of Alaska.

Make a chart to show population information.

(pp. 98-99) Prepare an exhibit of mineral products from Alaska. Exhibit may be keyed to map made by students.

Make a diorama to show various activities related to the fur industry in Alaska. The diorama may include trapping, hunting, preparation of skins, uses of furs.

3. a) (5) **CONSTRUCTS A GRAPH, DIAGRAM, CHART, OR THREE-DIMENSIONAL MODEL FROM VERBAL INFORMATION**

3. **TRANSLATION**
Construction
4-6

Grade 6: "Feudalism Preserves Western Culture"

(p. 132) Make working models of drawbridge, moat, and wall keep; and explain their function.

(p. 133) Draw a map diagram of a castle in medieval times in relation to landforms.

3. a) (5) **CONSTRUCTS CHART FROM VERBAL INFORMATION**

3. **TRANSLATION**
Charts
4-6

Have students prepare a chart, showing the difference between two animals, people, or plants about which they have read. They may use reference books to complete the chart. The teacher may give each student a duplicated outline, or the outline may be written on the blackboard.

Example:

THE PORCUPINE AND THE RACCOON		
	Porcupine	Raccoon
1. Appearance		
2. Kind of home		
3. Food		
4. Means of protection		
5. Habits		
6. Young		
7. Size		
8. Hibernation habits		
9. Usefulness		
10. Locale of habitat		

3. a) (5) **CONSTRUCTS A CHART FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Charts
9-12

WOC CURRICULUM

The MCPS Work Oriented Curriculum Course of Study for Grade 10 suggests as activities for WOC students the production of charts showing:

- Methods of Payment of Employees
- Organization of a Corporation
- Retail Store Organization
- Manufacturing Company Organization
- Office Organization
- Distribution of Goods

3. a) (5) **CONSTRUCTS A GRAPH FROM
VERBAL INFORMATION**

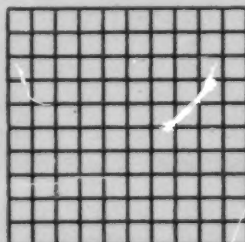
3. **TRANSLATION**
Graphs
3-6

As students arrive at the place in their computations at which they need to give the answers to addition and subtraction facts immediately and quickly, graphing the number right on each test can be fun and a real incentive to recall these facts quickly. The tests can be daily or weekly ones, based on the 100 addition and subtraction facts.

The large 100 unit paper (available from the warehouse) can be used for this activity. Each individual unit in the first row can stand for 10 facts. The next row of 10 units can stand for the number of minutes required to answer all the 100 facts. Color the number of facts correct in red, and color the number of minutes needed to complete the 100 facts in green. Each child then readily sees his record.

This same activity can be used for multiplication and division facts.

Minutes used
No. of items correct

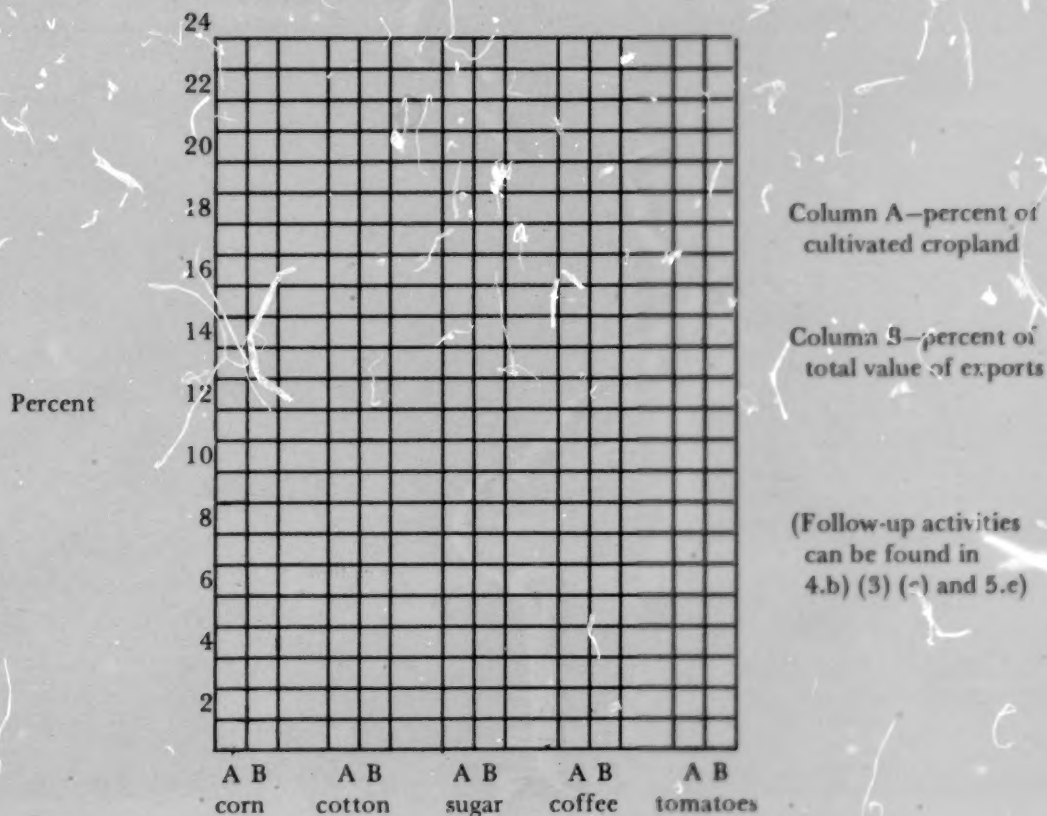


3. a) (5) **CONSTRUCTS A GRAPH FROM
VERBAL INFORMATION**

3. **TRANSLATION**
Graphs
7-12

Below is a list of Mexico's leading exports for 1968. The statistics given are percent of total value of exports and percent of cultivated cropland. On the graph below, construct bar graphs showing the percent of cultivated cropland in column A for each crop and percent of total value of exports in column B for each crop.

	Percent of Cultivated Cropland	Percent of Total Value of Exports
Corn	24.0	3.7
Cotton	3.9	13.6
Sugar	1.5	6.8
Tomatoes	0.3	4.6
Coffee	0.2	5.2



3. a) (5) **CONSTRUCTS A THREE-DIMENSIONAL MODEL FROM VERBAL INFORMATION**

3. **TRANSLATION**
Constructing Models
4-8

Constructing Geometric Models

Below are instructions for creating two geometric shapes. Each student will need a pencil, ruler, scissors, and tape. Have the students follow the written instructions in order to create a specific geometric shape.

Exercise 1

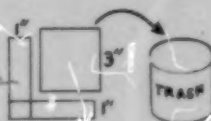
1. Have each student measure and cut out a four-inch square piece of paper.



2. Next, measure a one-inch strip on the left side and bottom of the square.



3. Cut out the three-inch square and discard it.



4. On the "L-shaped" paper, measure four one-inch squares on each side of the "L."



5. Last, fold over the sides of the "L" along the lines that have been drawn, and tape together. You now have a geometric shape. (CUBE)

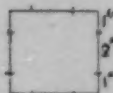
NOTE: One side of this cube will overlap.

3. a) (5) **CONSTRUCTS A THREE-DIMENSIONAL MODEL FROM VERBAL INFORMATION**

3 **TRANSLATION**
Constructing Models
4-8

Exercise 2

1. Have each student measure and cut out a four-inch square piece of paper.
2. Place two dots along each edge of the paper, each dot one inch from the corner.



3. Next, connect the dots on the opposite corners with straight lines.



4. Darken the square formed in the center by the intersecting lines.



5. From each of the corners of the small square, draw two lines connected to the nearest corner of the large square.



6. Cut along the lines just drawn, and remove the four outside triangles.



7. Fold along the edges of the small square so that the triangles meet at a point, and tape together. You now have a geometric shape. (PYRAMID)

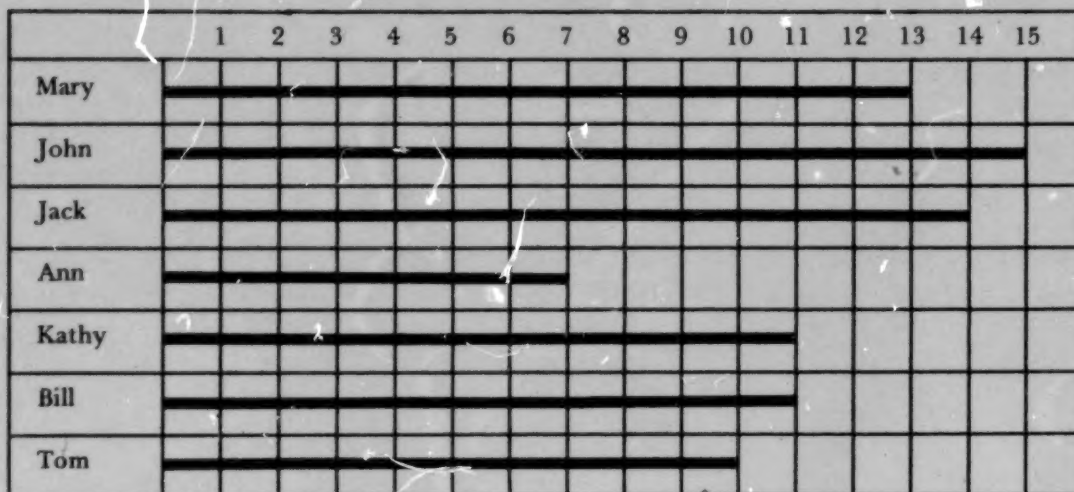
3. a) (6) EXPLAINS INFORMATION IN
GRAPHS

3. TRANSLATION
Graphs
3-6

GRAPH

Here is a graph that tells a story about a math test. The numbers across the top are the numbers of the problems. The names at the left are the names of the students who took the test.

Study the graph first. See how many problems each student was able to work correctly. After you are sure of the graph, answer the questions below the graph.



Questions:

1. Who solved the fewest number of problems?
2. How many problems did Tom solve?
3. Who solved all the problems?
4. How many problems did Jack solve?
5. Who solved more problems, Bill or Mary?

3. a) (6) EXPLAINS INFORMATION IN
GRAPHS

3. TRANSLATION
Graphs
5-8

The graph on page 351 shows the past, present, and predicted future number of students at eight selected Montgomery County high schools. Use this graph to answer the following questions:

1. Which high school has the lowest 1972 population?
2. Which high school has the highest 1973 population?
3. Which high school has the lowest 1974 population?
4. Which high school has 1800 students in 1976?
5. Which high school opens its doors in 1974?
6. Which high school has nearly the same number of students in 1972 and 1978?
7. How many students will Damascus gain from 1973 to 1975?
8. How many students will Olney gain from 1976 to 1978?
9. How many schools have more students in 1975 than in 1972?
10. Which school loses the most students from 1972 to 1978?
11. Which school gains students for three consecutive years and then decreases for three consecutive years?
12. Which school loses approximately the same number of students that Magruder gains from 1972-1978?

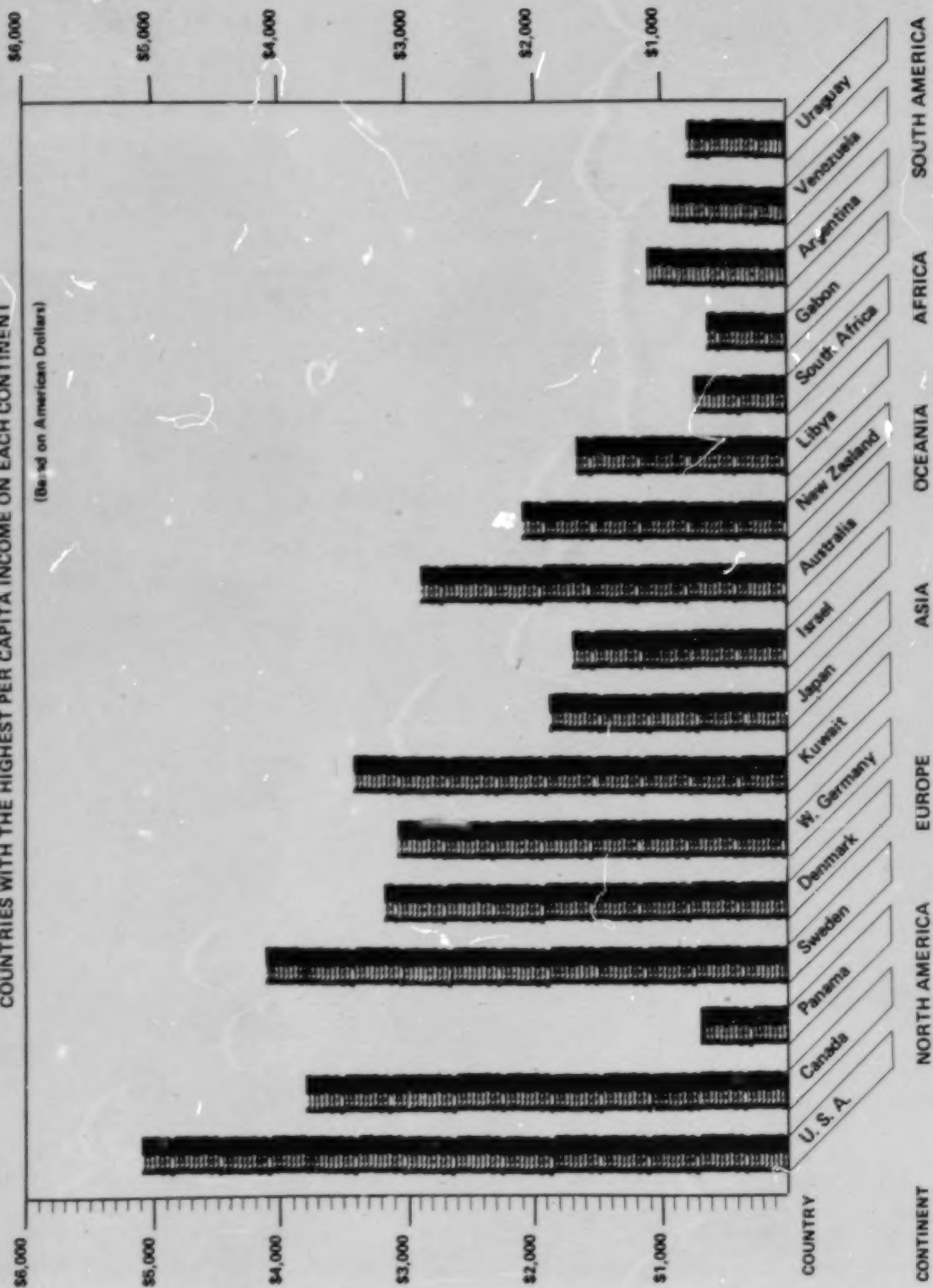
3. TRANSLATION
Graphs
5-12

The following graph shows the per capita incomes for selected countries. A first step in explaining graphic information would involve the literal responses to questions such as:

- | | |
|---|--------|
| 1. Which country has the highest per capita income? | U.S.A. |
| How much is the income there? | \$5100 |
| 2. Which continent shows three countries with incomes over \$3000 each? | Europe |

COUNTRIES WITH THE HIGHEST PER CAPITA INCOME ON EACH CONTINENT

(Based on American Dollars)



3. a) (6) **EXPLAINS INFORMATION IN GRAPHS**

3. **TRANSLATION**
Graphs
5-12

- | | |
|--|-------------------------|
| 3. Which continent has the largest spread between its highest per capita income and its third highest? What is the difference? | North America
\$4400 |
| 4. Which continent has the smallest spread between its highest and third highest incomes? | South America
\$300 |
| 5. What country shows the third highest per capita income in the world? | Canada |
| 6. Which continent shows the highest <i>average</i> per capita income? How much is that average? | Europe
\$3400 |

Subsequent use of graphic information could then extend (as appropriate) to the more complex areas of comprehension. For example, students may be asked to:

Make comparisons with the given information (Interpretation, objective 4.b) (2))

Predict extension of trends (Prediction, objective 5. d))

3. a) (6) **EXPLAINS INFORMATION SHOWN IN DIAGRAMS**

3. **TRANSLATION**
Diagrams
3-6

Many elementary social studies texts show diagrams such as

- The Great Pyramid
 - a space craft
 - a mine
 - a canal lock
 - a coastline

Teachers may help students begin translating diagrams into verbal information by discussing the diagram and asking them to put their finger on the place where

- the queen's chamber is located

3. a) (6) *EXPLAINS INFORMATION
SHOWN IN DIAGRAMS*

3. **TRANSLATION**
Diagrams
36

- fuel is stored
- the men will mine the coal
- water flows into Lock B
- the sedemintary layer is located

For evaluating this learning activity, different cross sections may be placed on an overhead or opaque projector with the various points labeled by letters or numbers. Students are instructed to copy the letter or number of the places listed orally by the teacher.

3. a) (6) *EXPLAINS INFORMATION
SHOWN IN THREE-
DIMENSIONAL MODELS*

3. **TRANSLATION**
Three-dimensional Models
7-12

THE EYE

The teacher first explains the location and function of the parts of the eye that can be shown by the model. The following parts of the eye may be included: cornea, sclera, iris, lens, aqueous humor, vitreous humor, retina, optic disc, optic nerve, recti muscles.

The students should then be able to take apart the model of the eye and identify the parts by name and function. They should also be able to show the path of light entering the eye and through which parts of the eye the message is relayed to the brain.

Exercises similar to the above could be done with models of the skin, ear, abdomen, flower, frog, or any other three-dimensional model at your disposal.

3. b) (1) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS**

3. **TRANSLATION**
Directions
K-3

Discuss with primary children the importance of following directions and ask them to think of some situations that might result from not following directions.

Discuss the importance of following directions having to do with safety and have the students make safety posters.

Let the students practice following oral directions, building up from one-step to more than one-step directions, before trying to read written directions.

Written directions for drawing, coloring, cutting, or pasting activities should be very simple at first, consisting of only one or two steps. They may gradually be increased in complexity as the teacher notes the child's increased skill in responding to more complex directions.

Children can first write directions for five single- or multi-part activities that could be performed in the classrooms, and then read their directions to another child to perform. Examples might be something like:

1. Get out of your seat, and open and shut the window.
2. Take a notice off the bulletin board.
3. Open a book.
4. Write and erase your name on the blackboard.
5. Run around the room; then return to your seat.

Have a treasure hunt in which children follow written clues which direct them to the place where the next clue is hidden.

3. **TRANSLATION**
Directions
1-2

Before a trip to the First and Second Grade Concerts of the National Symphony Orchestra, read and discuss with the children directions on Concert Manners. The following is taken from *So . . . You're Going to a Concert?* prepared under the auspices of the Cultural Arts Committee of the Montgomery Council of Parent Teacher Associations, Spring 1972.

3. b) (1) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS**

3. **TRANSLATION**
Directions
1-2

CONCERT MANNERS

I PROMISE TO TAKE CARE OF THE FELLOW SITTING JUST IN FRONT OF THE FELLOW IN BACK OF ME! (Me, Myself, and I)

1. Enter and leave the auditorium in an orderly way. Walk! Don't run!
2. Take off your wraps and get settled in your seat. Watch Orchestra members tune their instruments and "warm up."
3. Applaud when the Conductor walks onto the stage at the beginning of the concert.
4. Sit quietly so that you and everyone around you can listen to each selection. Do not talk to anyone after the concert begins.
5. Show your appreciation of the music by your applause at the end of each selection. You know the selection is over when the Conductor drops both arms to his sides and turns to face the audience.
6. Eating or whistling is out of order at a symphony concert.
7. Stay in your seat during the concert. If you must leave the auditorium, wait until the number being played is finished. Do not return to your seat while music is being played.
8. Thank the Conductor and the Orchestra with your applause after the last selection is finished.
9. Wait until the Conductor has left the stage before putting on your wraps and leaving your seat.

3. **TRANSLATION**
Directions
5-6

Before a trip to the Fifth and Sixth Grade Concerts of the National Symphony Orchestra, read and discuss with the children directions on Concert Manners. The following is taken from *So . . . You're Going to a Concert?* prepared under the auspices of the Cultural Arts Committee of the Montgomery Council of Parent Teacher Associations, May 1972.

CONCERT MANNERS

1. Enter and leave the Concert Hall in an orderly way. Stay with your group! Don't run!
2. Take off wraps and get settled in your seat immediately. Stay in your seat until the last number is over.

3. b) (1) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS*

3. **TRANSLATION**
Directions
5-6

3. Applaud when the Conductor walks onto the stage at the beginning of the concert. Applaud after each number.
4. Sit quietly — so you and everyone around you can listen to each number. Speak only when the Conductor asks you a question.
5. When the last number is over, thank the Conductor and the Orchestra with your applause.
6. Wait until the Conductor has left the stage before you put on your wraps and leave your seat.

3. **TRANSLATION**
Directions
1-6

DIRECTIONS FOR MAKING USE OF A BASAL READER MIGHT INCLUDE:

1. Read pages _____ and _____.

Answer the questions:

Who was _____?

Who went _____?

Where did _____ go (or happen)?

2. Draw a picture showing your answer to the question, " _____?"
3. Look on pages _____ to _____.

Write the words that begin like _____.

Write them in alphabetical order.

Write the words that rhyme with _____.

Make up a sheet with instructions such as:

1. Cross out three letters in the following word to make the word *hope*.

hopeful

3. b) (1) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS**

2. Print the missing letter in this word: rab_it

3. Add the ending *-less* to these words:

hope

help

harm

4. Find the fourth letter in each word below. Put these letters together to make a new word.

housetop

reindeer

before

clown

3. **TRANSLATION**

Directions
K-3

ASSIGNMENTS THAT CAN BE DUPLICATED

1.

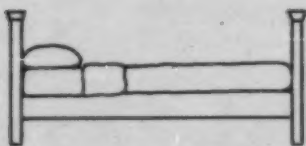


Put a line over the chair.

Put a line under the wagon.

Put an X on the cat.

2.



Draw a line from the bed to the toy.

or

Draw a line from under the bed over the ball to the tree.

3. b) (1) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS**

3. **TRANSLATION**
Directions
K-3

3. man red ball

Put an X on the color.

4. John went to the farm. He saw a cow, a chicken, and a pig.

cow chicken pig

Put an X on the largest animal he saw.

5. Write these words on your paper:

cow	robin	wren	girl
owl	teacher	cat	horse
man	crow	woman	
sheep	dog	sparrow	

Draw a line under all the animals.

Put an X on all the birds.

Draw a ring around all the people.

6. Jack brought a tadpole to school. At first, the tadpole had a long tail. Soon he had no tail at all. His legs grew. The tadpole became a frog.

Draw a ring around the word that tells what Jack brought to school.

frog dog tadpole

Put an X after the word that tells what the tadpole lost.

head legs tail eyes

7. James wanted a goat, a dog, or a pony for his birthday. His father gave him a pony. His mother gave him a dog.

Betty wanted a bird, a rabbit, or a duck for her birthday. Mother gave her a duck.

Put an X on James's pets.

Put a line over Betty's pet.

3. b) (1) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS**

3. **TRANSLATION**
Directions
K-3

goat	pony	bird
cat	dog	duck
chick	rabbit	robin
	horse	

8. Number your lines 1 to 15. Beside each number, do what the directions tell you.

1. Draw a tree beside number 1 on your paper. Put a moon beside it. Then put a house *under* the moon.
2. Turn to page 52 in your book. Find the second sentence on the page. Write the last word in the sentence, on line 2.
3. Draw a clock. Make it tell the time school begins.
4. Write the word *cold* if it is a cold day. Write *warm* if it is warm today.
5. Write your age on your last birthday.
6. Draw a square on this line.
7. Write the number four and draw a circle around it.
8. Count the number of windows in this room and write the number in words.
9. If there is a picture on the front wall of your room, write YES.
10. Write the word "saw" backwards and see what word you get.
11. Count the number of desks in your row and write the number in a box.
12. Write the name of the tallest animal in the zoo.
13. Draw something we use to cut with.
14. Print the name of something we use to write with.
15. Sign your initials on line 15.

3. b) (1) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS**

3. **TRANSLATION**
Directions
4-9

NUMBER GAME

Draw the numbers in the positions shown below.

1 4 7

2 5 8

3 6 9

Follow directions.

1. Connect 7 and 3 with a straight line.
2. Connect 3, 6, and 9 with a straight line.
3. Connect 7, 8, and 9 with a straight line.
4. What is the name given the geometric shape made by these straight lines? _____
5. Draw a circle around each of the following numbers: 1, 4, 2, 5.
6. Connect the circles with a straight line starting at 1, passing through 4, drawing on through 5, connecting 5 with 2, and ending at 1.
7. What is the name of this geometric shape?
8. Which figures would connect with straight lines to make the largest square possible?

This activity can be used in connection with study of geometric shapes.

3. **TRANSLATION**
Directions
4-6

SPATIAL IMAGE DIRECTIONS

Draw the dots in the positions as shown on the next page.

Follow the directions.

3. b) (1) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS**

3. **TRANSLATION**

Directions

4-6

- 
1. To the best of your ability, make a large circle, using the dots to guide your work.
 2. Within this large circle, draw a square, making the corners touch the circle at four places.
 3. Within the square, draw another circle, making it touch the square at four places.
 4. With your pencil, shade the area outside the inner circle but within the square.
 5. Within the last circle, draw any geometric figure you wish; but it must be kept within the area of the circle and touch the circle at three or four places.

FOLLOWING WRITTEN DIRECTIONS

The student writes the letters in the positions shown below. He follows directions given:

J Q M
O K P
N R L

1. Draw a large figure 8 starting at J and going around L, crossing at K.
2. Draw a square around O. Draw a square around R. Connect these squares with a straight line.
3. Draw a straight line from N to M, passing through K.
4. Write the figure 1 between J and Q. Write the figure 3 between O and K. Write the figure 2 between N and R. Using a straight line, connect 1 with 2, passing through 3.

3. b) (1) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS*

3. TRANSLATION
Directions
4-6

5. Starting at Q, use a broken line (-----) and mark the way to M. Continuing with a broken line, mark the way to P from M. From P, mark to Q. The design should have the shape of a triangle.
6. Write the figure 3 between P and L. Write the figure 4 between R and L. Using an oblong circle, enclose these two numbers.

3. b) (1)(a) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS, ONE STEP*

3. TRANSLATION
Directions
4-8

Below is an activity which will illustrate how well students follow directions and are able to recall facts. Read the directions and then the story aloud – and *very* slowly.

Directions:

Listen carefully so that you can answer the question I'll ask at the end of the story.

You are a bus driver with 15 passengers. At 12th Street, 13 passengers get off and 9 get on. At 10th Street, 10 passengers get off and 17 get on. At 8th Street, 5 passengers get off and 6 get on. At 6th Street, 9 passengers get on and no one gets off. At 4th Street, 1 passenger gets on and 16 get off. At 2nd Street, 2 passengers get on and 10 get off.

Question:

What is the name of the bus driver?

The question is a surprise. How many students remember that you told them that they were the bus driver in the beginning? You may want to also ask the obvious question, "How many passengers were on the bus at the end?" (5 passengers)

3. b) (1)(b) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS, MORE THAN ONE STEP*

3. TRANSLATION
Directions
2-4

ELEVATOR PANEL

			
			
EMERGENCY DIRECTIONS 1. Do not try to open the door. 2. Look at the panel of buttons in the elevator. 3. Push the "Emergency Call" button every few minutes until the engineer talks to you. 4. Follow any directions he gives. 5. When the elevator is fixed, push the button for the number of the floor where you want to get off.			

You are alone in an elevator. Suddenly it gives a jerk and stops between floors. Follow the emergency directions below the panel to get to your destination.

1. Put a cross on the button you would push to get help when you are stuck on an elevator.
2. Draw a circle around the button that you should not use if you are stuck between floors.
3. Place a line under the button you would use when the elevator is fixed.

3. b) (1)(b) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS, MORE THAN ONE STEP*

3. TRANSLATION
Directions
5-9

ELEVATOR PANEL

	 		
			
EMERGENCY DIRECTIONS 1. Do not try to open the door. 2. Look at the panel of buttons in the elevator. 3. Push the "Emergency Call" button every few minutes until the engineer talks to you. 4. Follow any directions he gives. 5. When the elevator is fixed, push the button for the number of the floor where you want to get off.			

You are alone in an elevator. Suddenly it gives a jerk and stops between floors. Follow the Emergency Directions below the panel to get to your destination.

1. If you get stuck between floors in an elevator, you should not
 - a) Open the door
 - b) Close the door
 - c) Sit down
2. If the engineer tells you to push the button for the ground floor, you will press button
 - a) 2

3. b) (1)(b) **PERFORMS A TASK IN RESPONSE TO DIRECTIONS, MORE THAN ONE STEP**

3. **TRANSLATION**
Directions
5-9

b) 1

c) G

3. When you are stuck between floors in an elevator, you should

a) Call out to someone in the hall

b) Press the "Emergency Call" button

c) Open the door

3. **TRANSLATION**
Directions
4-12

ASPIRIN

DIRECTIONS: For relief of minor headaches, neuralgia. Adults — 1 or 2 tablets with water every 3 or 4 hours, 5 to 6 times daily as required; children 10 to 16 years — 1 tablet; 6 to 10 years — $\frac{1}{2}$ -tablet; 3 to 6 years — $\frac{1}{4}$ -tablet. For children under 3 years of age, consult your physician. Dosage for children may be repeated every 3 hours, but not more than 3 times in one day, unless prescribed by child's physician.

CAUTION: If pains persist or recur, be sure to consult a physician.

WARNING: KEEP THIS AND ALL MEDICINES OUT OF CHILDREN'S REACH. IN CASE OF ACCIDENTAL OVERDOSE, CONTACT A PHYSICIAN IMMEDIATELY!

1. Adults may take
- a) 3 or 4 tablets at one time
 - b) 5 or 6 tablets at one time
 - c) 1 or 2 tablets at one time

3. b) (1)(b) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS, MORE THAN ONE STEP*

3. **TRANSLATION**
Directions
5-9

2. Adults should take no more than

- a) 12 tablets in one day
- b) 6 tablets in one day
- c) 1 or 2 tablets in one day

3. Children may take

- a) $\frac{1}{2}$ as many tablets as adults
- b) different dosages depending on age
- c) 1 tablet every 3 hours

3. b) (1) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS*

3. **TRANSLATION**
Directions
7-12

HOW WELL DO YOU FOLLOW DIRECTIONS?

If you do the following exercise correctly, you will change the name of an American President into the name of a European state. Check your method, speed, and accuracy in following directions.

Write down the words **GEORGE WASHINGTON**. Take out all the e's. Counting only the remaining letters, add an *l* after each seventh letter. Move the second *g* to the beginning and put the last letter in its place. Whenever three consonant letters appear together, change them in order that the first consonant letter in the group becomes the last, the one in second place takes the first position, and the one in third position becomes the middle consonant of the group. Take out the last two vowel letters. Where double consonant letters appear (ex: *pp*), take out both letters. Beginning with the third letter from the left, interchange each two letters. Take out the last two letters. Move the last letter so it will be the first letter. Add a *d* after each fourth letter and at the beginning. Replace every *s* with an *n*. Take out the middle three letters. Take out the final letter and put the first letter in its place.

If you did the exercise correctly with no errors at all, consider how you achieved this perfection in following directions and how you can transfer this skill to your school work.

3. b) (1) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS*

3. TRANSLATION
Directions
7-12

If you make errors before finally attaining perfection, consider how you can help yourself to avoid errors because you have experienced some of the difficulties in following directions.

If you gave up altogether, consider!

3. TRANSLATION
Written Directions
9-12

WOC CURRICULUM

One of the objectives of the Work Oriented Curriculum for Grade 10 is learning to understand simple written instructions such as how to open cartons or to "keep in a dry place." The teacher working with WOC students might find useful the material contained in the Barnell Loft series "Following Directions" (see Resources).

3. b) (1)(b) *PERFORMS A TASK IN RESPONSE TO DIRECTIONS, MORE THAN ONE STEP*

3. TRANSLATION
Directions
4-6

MAKING A RING TOSS GAME²

Read this set of directions. See whether you can repeat all the directions to me in order. (Let children read the set of directions twice only if necessary).

Find a box about 12 inches square.
Cut ten holes in the top of the box, the size of a dime.
Number the holes from one to ten.
Then stand a clothespin in each hole.
Use rubber jar rings to play the game.
Kneel about 5 feet from the board.
Toss the rings over the pins.
Keep score.
The person with the highest score after ten throws is the winner.

3. b) (1)(b)PERFORMS A TASK IN RESPONSE TO DIRECTIONS, MORE THAN ONE STEP

3. TRANSLATION
Directions
4-9

Number your paper from 1 to 10. After each number, do what each sentence tells you to do.

1. If cows eat grass, make an X on the first line; but if they eat meat, make a circle there.
2. If the days are longer in winter than in summer, write "yes" on the second line; if they are shorter, make a cross there.
3. If coal burns faster than wood, make a W after the number 3; but if not, make a cross there.
4. If airplanes travel faster than steamboats, make an A after number 4; but if steamboats travel faster, put a cross there.

Giving Directions

Give one student a drawing of a two-dimensional shape; and have him give the rest of the class directions on how to draw it, without showing it to them. The others in the class draw the shape following his directions, then compare their drawings with his original and consider whether the directions were clear or might be made more clear.

3. b) (2)PREPARES FOOD FROM A RECIPE

3. TRANSLATION
Following a Recipe
K-6

Cooking activities afford many opportunities for rewarding learning experience. Source of the following suggestions: Delaware/Maryland Head Start Regional Training Office:

CLASSROOM COOKING ACTIVITIES

1. Utilize recipes which will allow the children to do the majority of the preparation.
2. Legibly print the recipe on large paper and mount as near to the working area as possible. Use illustrations, food labels, etc., next to ingredient whenever possible.
3. The whole group need not cook all at one time. Many items can be prepared on consecutive days to allow for all to participate. Or, when making something like cookies, the recipe may be doubled to allow for more children to enter into the project after the mixing process has been completed. Depending on food being prepared, a group of 6 is a good size.

3. b) (2) *PREPARES FOOD FROM A
RECIPE*

3. **TRANSLATION**
Following a Recipe
K-6

4. Have more than one set of utensils such as measuring spoons, cups, mixing spoons, and spatulas to give as many children as possible an opportunity to participate in all steps.
5. Allow children to taste and/or smell and feel ingredients before they are combined. Cup cake papers provide easy containers for putting flour, salt, cinnamon, etc., to be tasted. Put more than one out to avoid congestion at the tasting point. Throw-away plastic spoons can be used for tasting after ingredients have been combined.
6. Cooking experiences provide an excellent means for demonstrating science principles to students. Take your time when cooking and talk about what is happening. Keep the *processes* in mind for much learning is involved here.
7. There are many different ways of combining and preparing foods to yield various results; e.g, milk and chocolate with other ingredients, can be put together to yield chocolate milk, hot chocolate, chocolate pudding, chocolate ice cream. What is it that causes all of these to have a slightly different consistency or temperature?
8. A round table is usually better for cooking experiences because participators and observers alike can see better; but any type of low table will do. Use a hot plate whenever you can (or electric skillet and pots) so that students can watch the changes that occur when heat is introduced.
9. Plan adequately. Go through the recipe yourself ahead of time. Be sure to have all the equipment you will need — extra spoons for tasting, paper towels, sponges, etc. — so that the activity will go smoothly without unnecessary interruptions.
10. Know in advance what concepts you want to discuss.
11. Remember to place heavy emphasis on the senses. How does the food taste? Smell? Feel?

Delaware/Maryland Head Start
Regional Training Office 1971

3. b) (2) *PREPARES FOOD FROM A
RECIPE*

3. TRANSLATION
Recipe
4-12

OVEN-GLAZED CHICKEN

1 3½ pound fryer, cut up
½ cup creamy French salad dressing
½ cup peach preserves
½ package (about 3 tablespoons) dry onion soup mix

Pre-heat oven to 325° F. Wash and dry chicken. Place in shallow baking dish. Mix together salad dressing, preserves, and dry onion soup mix. Pour over chicken. Bake in oven, uncovered, for 1½ hours, basting chicken occasionally with sauce during the last 30 or 45 minutes. Serve with rice or noodles, if desired. Serves 4.

1. The first step in preparing oven-glazed chicken is:
 - a) Place in shallow dish
 - b) Wash and dry chicken
 - c) Pre-heat oven to 325°
 - d) Serve with rice
2. This recipe serves _____ people.
 - a) 2
 - b) 7
 - c) 6
 - d) 4
3. The mixture used to pour over the chicken is made of
 - a) Rice and noodles
 - b) Salad dressing, preserves, and dry onion soup
 - c) Preserves and onion soup
 - d) French salad dressing, chicken, and preserves

3. b) (2) *PREPARES FOOD FROM A
RECIPE*

3. TRANSLATION
Recipe
4-12

4. Oven-glazed chicken is baked

- a) 1½ hours
- b) 30 or 45 minutes
- c) 1 hour
- d) 4 hours

3. b) (4) *FILLS OUT FORMS*

3. TRANSLATION
Completing Forms
4-12

Basic and "survival" reading tasks include:

- Completing applications, such as
 - Credit card applications
 - Job applications
 - Application for a driver's license
- Completing forms, such as
 - Library card forms
 - Mail order forms

MAGAZINE SUBSCRIPTIONS³

When filling out a form for ordering a magazine subscription, it is a good idea to know whether or not you are really going to receive a "good deal."

Read through the form below, and then answer the questions provided.

3. b) (4) FILLS OUT FORMS

3. TRANSLATION
Completing Forms
4-12

Please send me 25 weeks of SPORTS FUN for \$3.95 and bill me later.	1234 Gridiron Road Yonkers, New York 01234
☐ Double Your Savings! 50 weeks for \$7 90	
Mr. Mrs. Miss Ms. _____	
(please print)	
Address _____	Apt. # _____
City _____	State _____ Zip Code _____
This rate includes all postage and handling and is good in the U.S. only.	
FOR NEW SUBSCRIBERS ONLY	
S40842	

Questions on Magazine Subscriptions:

Pick one set and try it.

Set 1*

1. For \$7.90, how long will you receive this magazine?
2. If you live in an apartment, what specific information must you include when filling out your address?

*Note: Set 1 – Literal, Set 2 – Interpretation, Set 3 – Problem Solving
These levels of thinking are from Robert M. Wilson and MaryAnne Hall, *Reading and the Elementary School Child* (New York: Van Nostrand Reinhold Co., 1972). See cross-reference between the three levels above and the MCPS 9 Comprehension categories, p. 46.

3. b) (4) *FILLS OUT FORMS*

3. TRANSLATION
Completing Forms
4-12

Set 2*

1. If you already subscribe to this magazine, can you renew your subscription with this application? Why or why not?
2. If you order this magazine for 25 weeks, will your total bill be exactly \$3.95? How do you know?

Set 3*

1. Suppose you order this magazine for 25 weeks and then decide to renew your subscription for an additional 25 weeks. Will your cost be equal to, less than, or more than what you would have paid by originally ordering a 50-week subscription? How can you support your answer?
2. Can you tell by the information given on this application whether you really "double your savings" by subscribing to this magazine for 50 weeks with this application? Why or why not?

Answers: Compare your answers with ours, or check with your teacher.

Set 1

1. 50 weeks
2. Apartment number

Set 2

1. No. This application is for new subscribers only.
2. Yes. \$3.95 includes all postage and handling charges.

Set 3

1. At \$3.95 for 25 weeks, it might seem that you would pay exactly \$7.90 for a 50-week period. However, this offer is available *only* to new subscribers. This may mean that at the end of your first 25-week subscription, you may be required to pay more than \$3.95.
2. No. You do not know the usual cost of this magazine.

*See footnote on preceding page.

3. c) (1) **DRAMATIZES, ROLE-PLAYS,
OR PANTOMIMES**

3. **TRANSLATION**
Dramatization
K-6

DRAMATIC PLAYS

Students can assume roles of story characters and act out stories and plays which they read.

Dialogue can be spontaneous and impromptu, suggested by – rather than duplicating – the exact words of the story.

For added enjoyment, props and such extras as music and sound effects can be prepared.

One student might study a story so that he can tell it to the class. Pupils can be selected by the storyteller to assume characters as the story is being told. They do not need to know the story.

In this kind of dramatic play, the teacher should review qualities of effective story-telling so that the plot moves along to a climax and then to a conclusion.

Along with the dramatization, the students might:

1. Paint background scenery for productions.

2. Cut out simple costume features as:

hats and helmets	ornaments
collars	jackets
aprons	crowns

3. Construct simple props of wood or paper as:

treasure chests	walking cane
rocket ships	fairy wand

3. **TRANSLATION**
Dramatization
1-3

Source: *MCPS ELA Bulletin No. 185*

Grade 1: *Make Way for Ducklings*

(p. 1-9) Why did Mrs. Mallard tip her nose in the air and walk with an extra swing in her waddle? Pretend you are Mrs. Mallard. Show how you would walk.

3. c) (1) *DRAMATIZES, ROLE-PLAYS,
OR PANTOMIMES*

3. **TRANSLATION**
Dramatization
1-3

Grade 2: *Down, Down the Mountain*

(p. II-2) Ask the children to pretend that they are Hetty and Hank and to imagine what they would do if they wanted something very much. Show the pictures as you read.

Grade 3: *Winnie the Pooh*

(p. III-20) Question children to ascertain before reading *Winnie the Pooh* whether they have met Christopher Robin through the two books of poetry, *When We Were Very Young* and *Now We Are Six*. If so, through discussion have them revisit Christopher's home, play train with him in the nursery, accompany him to the zoo to see bears or to Buckingham Palace to watch the changing of the guards.

Have children dramatize favorite parts of the story, playing the characters or using puppets.

3. **TRANSLATION**
Dramatization
2-4

Source: *MCPS Social Studies Bulletin No. 175 - Illustrative Units (K-6)*

Grade 2: "We Look at Our Community"

(p. 97) Develop skits showing how special places in the community help us learn things.

Grade 4: "Across the Ocean to the New Lands"

(p. 4) Dramatize a meeting in which several merchants are discussing the possibilities of supporting an expedition to the Far East. They should consider such things as:

- Expectations for profitable returns
- Necessary supplies and personnel
- Possible routes

(p. 6) Dramatize a scene in which one of the explorers is seeking support for an expedition. His plea should include plans for the expedition; reasons; and expected results.

3. c) (1) *DRAMATIZES, ROLE-PLAYS,
OR PANTOMIMES*

3. **TRANSLATION**
Dramatization
2-4

(p. 7) Plan and present a "You Are There" program on tape to reenact a dramatic episode during early settlements:

- The Pilgrim Landing
- Indian and White Man Meet
- A New Home for the Poor (Georgia)
- Fur Trading with the Indians

3. **TRANSLATION**
Dramatization
4-6

ACTING OUT NEWS

This game, played by two or more players, involves two levels of thinking: location of specific information and translation into another form.

First take a newspaper and decide on certain pages and certain kinds of items to be used. Then a player or group of players selects a news item to be acted out in pantomime. As the player or group act out the item, the others look at the newspaper page and try to guess which item is being dramatized.

MAKE BELIEVE

Cards are passed out to the students with sets of directions on them. One student is called upon to follow the directions on his card. The rest of the group are to guess what is on the card. After his pantomime is finished, the student reads his card orally to the class. Examples:

Make believe you are a teacher. Show how a teacher gets the attention of the class at 9:00 a.m. You are the teacher and you have a spelling lesson with your students.

Make believe you are a salesperson who has come to the door to sell magazines. Show your product and try to persuade the customer to buy it.

Other activities which lend themselves to pantomime guessing games:

Eating a banana
Eating spaghetti
Hanging clothes on a line
Sweeping the floor

3. c) (1) **DRAMATIZES, ROLE-PLAYS,
OR PANTOMIMES**

Painting a picture
Washing dishes
Running a vacuum cleaner
Changing a tire
Cutting flowers to put in a vase
Typing a letter and envelope, sealing and mailing it
Wrapping a package
Feeding a dog

3. **TRANSLATION**
Dramatization
4-6

3. **TRANSLATION**
Dramatization
7-12

At any level, students may translate ideas into a sociodrama, in which they act out an episode based on something they are studying. Suggestions for using sociodrama at the secondary level in social studies may be found in Sanders' *Classroom Questions*⁴ where a sociodrama based on study of the process of enactment of a bill into law is described. The procedure was, first, textbook study of the legislative process, then assignment of roles to students, then posing of a series of problems by the teacher to stimulate student thinking. Sanders points out that this was a translation activity since the students had first studied the legislative process in written materials, then translated the ideas into sociodrama. A sociodrama on the translation level requires prior complete explanation and understanding of the ideas involved. In actual practice in a classroom, however, as Sanders also points out, a teacher would not restrict the activity to translation questions but would involve various levels of thinking. For example, calling upon the students to make decisions which had not previously been discussed or read about in the textbook would call for thinking on the evaluation level.

3. **TRANSLATION**
Dramatization
9-12

WOC Curriculum

The MCPS Work Oriented Curriculum Course of Study for Grade 10 suggests in Unit VI that students read about the characteristics needed to be a salesclerk and then translate the verbal material into role-playing, with students playing the roles of customer and salesclerk.

3. c) (2) TRANSLATES LITERARY, IDIOMATIC, GEOGRAPHIC, CULTURAL, OR OCCUPATIONAL DIALECT INTO OWN PERSONAL (STANDARD OR NON-STANDARD) DIALECT

3. TRANSLATION
Dialect
2-12

This objective includes the type of thinking in which a student reads something written in a dialect other than the language used in his/her family and peer group and is able to understand it in terms of that language. For example, a student who ordinarily uses a non-standard dialect, such as "ghetto" dialect, while continuing to speak in his own dialect, needs to learn to translate the standard dialect of written material into his own language so that what he reads is meaningful to him. A student whose own personal dialect is more similar to the standard dialect of the books he reads will still need to be able to translate stories and poems written in geographic or cultural dialects other than his own. These would include certain old folktales (such as those found in the *Sounds of Language Readers*),⁵ the dialect poems of poets like James Whitcomb Riley and Paul Laurence Dunbar, and books like *The Yearling*, in which the conversation is written to simulate a particular regional dialect.

As students reach the higher grades, they will come into increasing contact with the "literary dialect" of writers like Shakespeare and Milton, whose literary language is different from the spoken and written standard dialect of today. While such language will be encountered mostly at the secondary school level, elementary school children will have contact with it in some poetry. (An amusing example of a more formal kind of dialect which elementary children may have fun with is the elaborate, pompous speech of Father in Robert Lawson's *Rabbit Hill*.) As students encounter formal, literary dialect, they will translate it into their own language in thinking about its meaning.

Elementary teachers will find a very useful discussion of different levels of language in the teachers' manuals of the *Sounds of Language Readers*.⁵ The different levels are called "home-rooted language," represented in the readers by vernacular tales; "public language," found in factual reading material; and the "life-lifting language" of poetry and other literature. The point is made that all three are important facets of a child's language experience and he should be given the opportunity to experience all three in his reading.

3. TRANSLATION
Dialect
2-6

Many of the units in the Literature section of the Elementary Language Arts Course of Study contain suggestions for increasing students' understanding of the various kinds of dialect found in literature. Among these are the following:

Down, Down the Mountain by Ellis Credle — Grade 2, page II-1

Hi, Tom by Wanda Ward — Grade 3, page III-1

Owls in the Family by Farley Mowatt — Grade 3, page III-17

3. c) (2) *TRANSLATES LITERARY, IDIOMATIC, GEOGRAPHIC, CULTURAL, OR OCCUPATIONAL DIALECT INTO OWN PERSONAL (STANDARD OR NON-STANDARD) DIALECT*

3. **TRANSLATION**
Dialect
2-6

Rabbit Hill by Robert Lawson — Grade 4, page IV-1

Ginger Pye by Eleanor Estes — Grade 4, page IV-7

Paul Bunyan by Dell J. McCormick — Grade 4, page IV-25

The Empty School House by Natalie Savage Carlson — Grade 4-5, page IV-29

The Sun is a Golden Earring by Natalia M. Belting — Grades 4-6, page IV-35

Queenie Peavy by Robert Burch — Grades 5-6, page VI-17

This Dear-Bought Land by Jean Lee Latham — Grades 5-6, page VI-27

Across Five Aprils by Irene Hunt — Grades 5-6, page VI-51

Mogo's Flute by Hilda van Stockum — Grades 5-6, page VI-19

3. **TRANSLATION**
Idiomatic Language
4-9

The five exercises in idiomatic language which follow are from the same source.⁶

INFORMAL LANGUAGE: Usage Labels (pages 119-120)

Note: This exercise is based on the format of *The American College Dictionary*. Not all dictionaries will classify these words in the same manner. A similar dictionary exercise can be developed using your own classroom dictionary.

Directions: Use the dictionary to answer the following questions.

1. Is *ack-ack* considered slang? _____
2. *Cuckoo* is slang when it means _____.
3. *Giveaway* is colloquial when it means _____.
4. Archaically, *gat* means _____; *gat* is slang when it means _____.

3. c) (2) TRANSLATES LITERARY, IDIOMATIC, GEOGRAPHIC, CULTURAL, OR OCCUPATIONAL DIALECT INTO OWN PERSONAL (STANDARD OR NON-STANDARD) DIALECT

3. TRANSLATION
Idiomatic Language
4-9

5. Dialectically, a *poke* is a _____; archaically, *poke* is a _____.
6. Colloquially, a *poker* face is _____.
7. Is *point* considered archaic in any sense? If so, define it. _____
8. Colloquially, *fix* has several definitions. List two. _____
9. Is *flame* ever considered slang? _____
10. When *roll* is slang, it means _____.
11. Dialectically, *foul* means _____.
12. Is *class* ever considered slang? _____
13. When used as slang, *horse* means _____.
14. Colloquially, *rat* means _____.
15. Is *land* ever considered colloquial? _____

INFORMAL LANGUAGE: Idioms — Matching Exercise (pages 121-122)

Note: The definitions of the following idiomatic phrases were taken from the Thorndike-Barnhart *Advanced Junior Dictionary*. The correct answers are given in the column at the right.

Directions: Match the idiomatic phrases in column A with the correct definitions in column B. Write the letter of the correct meaning beside the proper idiom.

A	B	Answers
1. under foot	a. at once, immediately; with delay	1. d
2. make head or tail of	b. try; attempt	2. n
3. make or break	c. going down	3. r
4. bring to pass	d. in the way	4. e
5. for one to	e. accomplish; to cause to be	5. j

3. c) (2) *TRANSLATES LITERARY, IDIOMATIC, GEOGRAPHIC, CULTURAL, OR OCCUPATIONAL DIALECT INTO OWN PERSONAL (STANDARD OR NON-STANDARD) DIALECT*

3. TRANSLATION
Idiomatic Language
4-9

A	B	Answers
6. in commission	f. read or look at for a short time	6. i
7. dip into	g. give up; let go	7. f
8. in general	h. carry out to the end	8. s
9. on the nail	i. in service; in use	9. a
10. once over	j. that one will, should, must, etc.	10. m
11. one and all	k. keep on tiresomely talking of or writing about	11. q
12. have a fling at	l. notwithstanding; nevertheless	12. b
13. follow out	m. a single time over	13. h
14. harp on	n. understand	14. k
15. down grade	o. the symbols of public office	15. c
16. part with	p. say, write, or make in a quick, easy way	16. g
17. reel off	q. everyone	17. p
18. all the same	r. cause to succeed or fail	18. l
19. the seals	s. referring to all those mentioned	19. o
20. shake off	t. get rid of	20. t

INFORMAL LANGUAGE: Idioms — Recognition Exercise (page 123)

Directions: Can you tell an idiom when you see one? Decide whether the italicized words are idioms or have an ordinary meaning. Write the correct answer on the blank line at the end of the sentence.

1. You left the decimal *point out* of this figure. (ordinary)
2. Let me *point out* that you have been sick. (idiom)

3. c) (2) *TRANSLATES LITERARY, IDIOMATIC, GEOGRAPHIC, CULTURAL, OR OCCUPATIONAL DIALECT INTO OWN PERSONAL (STANDARD OR NON-STANDARD) DIALECT*

3. TRANSLATION
Idiomatic Language
4-9

- | | |
|--|-------------------|
| 3. We <i>pushed on</i> the door and it opened. | <u>(ordinary)</u> |
| 4. The weary travelers <i>pushed on</i> into the storm. | <u>(idiom)</u> |
| 5. The boys <i>put up</i> the tent in the back yard. | <u>(ordinary)</u> |
| 6. We can't <i>put up</i> with this noise much longer. | <u>(idiom)</u> |
| 7. Jack tried to <i>puzzle out</i> the meaning of the code. | <u>(idiom)</u> |
| 8. Jane left the <i>puzzle out</i> on the table. | <u>(ordinary)</u> |
| 9. The driver slowed the horses and <i>pulled up</i> before the door of the inn. | <u>(idiom)</u> |
| 10. The Indians then <i>pulled up</i> the ladders. | <u>(ordinary)</u> |

INFORMAL LANGUAGE: Idioms — Dictionary Exercise (page 124)

Directions: Use the dictionary to find two idiomatic expressions using each of the following words. Use them in sentences. Underline the idiomatic expressions.

1. come
2. do
3. put
4. eye
5. get
6. give
7. go
8. hand
9. keep
10. set

3. c) (2) **TRANSLATES LITERARY, IDIOMATIC, GEOGRAPHIC, CULTURAL, OR OCCUPATIONAL DIALECT INTO OWN PERSONAL (STANDARD OR NON-STANDARD) DIALECT**

3. **TRANSLATION**
Idiomatic Language
4-9

INFORMAL LANGUAGE: Rewriting exercise (page 125)

Directions: Each of the following informal sentences contains a slang or colloquial expression. Rewrite each sentence using formal English.

1. The elderly gentleman *owned up* the theft of the jewelry.
2. The committee *aimed to* establish better relations in the community.
3. He *came across with* the money to pay the bill.
4. *A lot of* work was done by the representatives.
5. We have learned not to *bank on* your promise.
6. You are *close with* your money.

3. c) (3)(a) **EXPLAINS FABLES**

3. **TRANSLATION**
Figurative Language
K-6

At the elementary level, the teacher may introduce Aesop's *Fables* and encourage children to discuss the nature of a fable — how it disguises human behavior in a tale of animal behavior and ends with a moral meant for human beings. Children can then read individual fables and retell them in their own words and discuss what they think the story is trying to teach before comparing their ideas with the morals usually printed at the end of each fable. The important behavior here is translating a story of imaginary animals into possible real life situations involving people.

See the unit on *The Blind Men and the Elephant* in the MCPS ELA Bulletin No. 185, page II-23.

3. c) (3)(a) EXPLAINS PROVERBS

3. TRANSLATION Figurative Language 4-6

Everyday we use certain sayings to illustrate something that has happened or something that we do. These sayings are called mottoes or proverbs. They are passed on from one generation to another and are used and understood by many, many people.

Mottoes or proverbs are sometimes carved on buildings. In the past, women and little girls embroidered them on cloth; these are called samplers and were hung in the home.

Famous people often coined mottoes or proverbs. Benjamin Franklin created quite a few in *Poor Richard's Almanac*. Aesop did likewise in his *Fables*. Many more proverbs have no known author but are kept alive generation after generation because they emphasize a moral so neatly.

Pupils are familiar with some of the most frequently used proverbs, such as "Make hay while the sun shines," "A stitch in time saves nine," and "Haste makes waste." Discuss the point that old proverbs teach a moral through allusions to common objects in people's everyday experience.

Pupils may collect mottoes and proverbs from various sources — over doorways to public buildings, for example. They may try their hand at making up mottoes and proverbs of their own. They may illustrate mottoes and proverbs on paper, by pantomime, or by acting out appropriate situations themselves or with puppets.

3. c) (3)(a) EXPLAINS PROVERBS (OR MOTTOES)

3. TRANSLATION Figurative Language 4-12

Here are some mottoes or proverbs:

1. A word to the wise is sufficient. (Franklin)
2. A penny saved is a penny earned. (Franklin)
3. Never leave until tomorrow what you can do today. (Franklin)
4. Don't put all your eggs in one basket. (old French proverb)
5. Better late than never. (Heywood)
6. Beggars can't be choosers. (Heywood)

3. c) (3)(a) *EXPLAINS PROVERBS*

3. **TRANSLATION**
Figurative Language
4-12

When students are familiar with the nature of proverbs, give them scrambled sayings like those below. After the proverbs have been unscrambled, discuss what they mean.

FIGURATIVE LANGUAGE: REWRITING EXERCISE⁷

Part A.

Directions: Rewrite the following scrambled sayings:

1. A rolling stone is worth two in the bush.
2. The early bird always turns up.
3. People in glass houses flock together.
4. An empty sack blows no good.
5. Still waters turneth away wrath.
6. A bird in the hand catches the worm.
7. Birds of a feather shouldn't throw stones.
8. A soft answer run deep.
9. It's an ill wind that gathers no moss.
10. The bad penny can't stand.

Part B.

Answers

1. A rolling stone gathers no moss.
2. The early bird catches the worm.
3. People in glass houses shouldn't throw stones.
4. An empty sack can't stand.
5. Still waters run deep.

3. c) (3)(a) EXPLAINS PROVERBS

3. TRANSLATION
Figurative Language
4-12

6. A bird in the hand is worth two in the bush.
7. Birds of a feather flock together.
8. A soft answer turneth away wrath.
9. It's an ill wind that blows no good.
10. The bad penny always turns up.

3. c) (3)(b) EXPLAINS FIGURES OF
SPEECH

3. TRANSLATION
Figures of Speech
5-12

Among the figures of speech which involve translation into literal language are:

Simile	Metonymy
Metaphor	Synecdoche
Personification	Antithesis
Apostrophe	Hyperbole
Allusion	Litotes

Definitions and examples of each of these follow:

1. A *simile* is an expressed likeness or comparison of two persons or things essentially different in most respects but alike in one or more. "Ship like a small shell afloat"; and "... her brother was as quick as a cricket." – *Island of the Blue Dolphins* – O'Dell
2. A *metaphor* is an implied or understood likeness or comparison. "The road was a ribbon of moonlight." – "The Highwayman" – Noyes
3. *Personification* is a metaphor in which an animal quality or an inanimate object is treated as if it were a person. Ex.: "A tree that may in summer wear a nest of robins in her hair." – "Trees" – Kilmer

3. c) (3)(b) **EXPLAINS FIGURES OF
SPEECH**

3. **TRANSLATION**
Figures of Speech
5-12

4. *Apostrophe* is a form of personification in which the absent or dead are spoken to as if present, and the inanimate as animate. Ex.: "Milton, thou shouldst be living at this hour." – "London, 1802" – Wordsworth
5. An *allusion* is a reference to some familiar person, object, or event in history, romance, or literature. Ex.: "He met his Waterloo."
6. *Metonymy* is the substituting of one word for another which it suggests. Ex.: "The baby loves its bottle." (meaning the milk in the bottle).
7. *Synecdoche* is a kind of metonymy in which the part stands for the whole or the whole for the part. Ex.: "The factory employed one hundred hands"; "... our daily bread."
8. *Antithesis* is a figure based on unlikeness, in which ordinarily verbs are contrasted with verbs, nouns with nouns, etc. Ex.: "For fools rush in where angels fear to tread." – "Essay on Criticism" – Pope
9. *Hyperbole* is another name for exaggeration. Ex.: "I ate a mountain of ice cream."
10. *Litotes* is a statement denying its opposite. Ex.: "He was a citizen of no mean city."

Elementary school children will probably become familiar with simile, metaphor, and personification. Various units in the Literature sections of the *MCPS ELA Bulletin No. 185* contain suggestions for developing children's awareness of figurative language. See the following units in the *MCPS ELA Bulletin No. 185*.

	Page
<i>Daniel Boone</i> by James Daugherty – Grade 6	VI-1
<i>Island of the Blue Dolphins</i> by Scott O'Dell – Grade 6	VI-9
<i>Mogo's Flute</i> by Hilda van Stockum – Grades 5-6 (Look on page VI-25 for specific examples.)	VI-19
<i>The 21 Balloons</i> by William Pene du Bois – Grade 6	VI-39
Poetry – "Silver Ships" by Mildred P. Meigs – Grade 5	V-10, 11

As elementary children become familiar with these figures of speech, they may keep lists of colorful examples they encounter in their reading or listening.

3. c) (3)(b) *EXPLAINS FIGURES OF SPEECH*

3. **TRANSLATION**
Figurative Language
7-12

FIGURATIVE LANGUAGE: IDENTIFICATION EXERCISE⁸

Directions: Identify the figure of speech used in each of the sentences below. Write the name of the correct figure of speech to the left of the sentence. The figures of speech included are the hyperbole, metaphor, metonymy, personification, simile, and synecdoche.

- _____ 1. He ran like the wind.
- _____ 2. Her face had a ghostly pallor.
- _____ 3. The house was silent as a tomb.
- _____ 4. Her masthead split in two, the schooner was unable to proceed.
- _____ 5. Labor and capital often seem to disagree.
- _____ 6. Her hopes for the trip were sky-high.
- _____ 7. The press gave unfavorable reports.
- _____ 8. The report that all hands were lost was untrue.
- _____ 9. The east wind prophesied rain.
- _____ 10. He was but a shadow of his former self.

ANSWERS	1. simile	5. metonymy	9. personification
	2. metaphor	6. hyperbole	10. metaphor
	3. personification	7. metonymy	
	4. personification	8. synecdoche	

FIGURATIVE LANGUAGE⁹

Directions: Write the meanings of the phrases below.

1. dappled lawn _____
2. shafts of light _____

3. c) (3)(b) **EXPLAINS FIGURES OF
SPEECH**

3. peals of thunder _____
4. chanticleer of the dawn _____
5. a cool reception _____
6. smoke curling through the air _____
7. the lazy afternoon _____
8. harbinger of spring _____
9. the wind, whipping her skirts _____
10. the roaring sea _____

3. **TRANSLATION**
Figurative Language
7-12

3. **TRANSLATION**
Figurative Language
9-12

Avon Products, Inc. puts out a booklet for teen-age boys which is entitled *Avon's Grooming Rally*. It deals with the subject of good grooming and health habits in terms of car rallies and racing, treating the body as a car and comparing sleep, for example, to a pit stop. The booklet contains much information both on sensible health habits and on cars and racing, including a glossary of racing terms. It may be obtained from Avon Products, Inc., 30 Rockefeller Plaza, New York, New York 10020.

3. d) (1) **STATES IN OWN WORDS OR
PARAPHRASES**

3. **TRANSLATION**
Paraphrase
K-6

A teacher might use some of the following to encourage primary students to restate in their own words:

- a story read to the class
- the part of the story they like best
- the funniest, most exciting, or saddest part of the story

3. d) (1) STATES IN OWN WORDS OR
PARAPHRASES

3. TRANSLATION
Paraphrase
K-6

At the intermediate level:

- a point of view expressed in a discussion, film, or book
- a demonstration explained in a science textbook
- the points covered in a lesson introducing a new topic
- a newspaper feature article

3. TRANSLATION
Paraphrase
4-6

HOW ELSE WOULD YOU SAY IT?

Ask the student to rewrite phrases, sentences, or rhymes, using synonyms or definitions for the original words. This can be an imaginative learning center activity for all grade levels.

Example: Look at the birds in the sky.

Possible rewrite: Glance toward the creatures flying above the earth.

WHAT RHYME IS IT?

Turn the above activity around by giving the students the rewritten sentences, asking them to guess what rhyme you are paraphrasing.

Examples:

(Ancient ruler) _____ was a happy individual.

_____ and _____ ascended the natural rounded elevation of land.

There existed an ancient female person who had her docimile in a leather outer covering for the human foot.

REDEFINING

Give students definitions from a dictionary and ask them to restate the definition in their own words. Care must be exercised in selecting definitions which lend themselves to such restatement and which are at the level of the students' understanding.

3. d) (1) *STATES IN OWN WORDS OR
PARAPHRASES*

3. **TRANSLATION**
Paraphrase
4-6

Concerning translation, Sanders suggests that on occasion a teacher may wish to structure a question so that students are asked to recognize translation, rather than translating themselves. If the teacher wishes to make sure that they understand an idea or passage which seems too difficult for them to put into their own words, he/she may rewrite the passage in simpler language and ask them to find the passage in their reading which best paraphrases the one just written. Or the teacher may write several paragraphs and ask the students to indicate which one best expresses the meaning of a given passage in their reading.

This kind of activity is less difficult than asking the student to do the paraphrasing; it may be useful for short objective exercises or in dealing with complex ideas.

A more advanced translation exercise asks students to paraphrase sentences containing ideas without repeating more than one or two of the main words that give the sentences their semantic content — the nouns, verbs, and adjectives.¹⁰

3. a) *TRANSLATES FROM VERBAL
FORM TO PICTORIAL AND DIA-
GRAMMATIC FORM AND VICE
VERSA*

3. b) *TRANSLATES DIRECTIONS INTO
ACTION OR A PRODUCT*

3. c) *TRANSLATES TO ANOTHER
VERBAL FORM OR KINESICS*

3. d) *TRANSLATES FROM ONE LEVEL
OF ABSTRACTION TO ANOTHER*

3. **TRANSLATION**
Pictures/Directions/
Dramatization/Restatement
K-6

The following excerpts from the guide *492 Ways to Use a Newspaper in the Elementary Classroom*¹¹ are examples of activities related to translating a communication into a different form, different language, or different level of abstraction. (It will be noted that some of these activities involve going beyond Translation into Interpretation and Prediction.) This illustrates an important point: Although the levels of thinking are defined and discussed separately in this document, in an actual classroom situation an activity would be planned by the teacher so that it would encourage many kinds of thinking rather than just one.

3.c)(1) Dramatize incidents in comic strips, such as:

Henry
Nancy
Peanuts

3. a) *TRANSLATES FROM VERBAL FORM TO PICTORIAL AND DIA-GRAMMATIC FORM AND VICE VERSA*
3. b) *TRANSLATES DIRECTIONS INTO ACTION OR A PRODUCT*
3. c) *TRANSLATES TO ANOTHER VERBAL FORM OR DINESICS*
3. d) *TRANSLATES FROM ONE LEVEL OF ABSTRACTION TO ANOTHER*

3. TRANSLATION
 Pictures/Directions/
 Dramatization/Restatement
 K-6

- 3.a)(2) Clip pictures from the magazine section of the Sunday paper and
 - tell* what is happening in the picture
 - make* inferences as to what is about to happen
 - relate* personal experiences that are similar
- 3.c)(1) Find pictures and clippings of personalities in the news.
 - Pretend to introduce the personalities.
 - Prepare questions to ask.
 - Dramatize outstanding events with which they are connected.
- 3.c)(1) Tell which is the most humorous strip for the day. Why?
 - Dramatize it.
- 3.c)(1) Prepare news items to use in a game of charades:
 - personalities and events in news
 - slogans from advertisements
- 3.a)(2) Clip and mount interesting photographs and pictures on strip.
 - Write commentaries to use in puppet plays.
- 3.d)(1) Select classmates to represent sportscasters reporting interesting sports news each week.
- 3.a)(2) Become familiar with the various symbols used in cartoons; some of these are
 - the white-bearded gentleman
 - bear
 - elephant
 - donkey
- 3.a)(1) Use these symbols in original cartoons.

3. a) *TRANSLATES FROM VERBAL FORM TO PICTORIAL AND DIAGRAMMATIC FORM AND VICE VERSA*
3. b) *TRANSLATES DIRECTIONS INTO ACTION OR A PRODUCT*
3. c) *TRANSLATES TO ANOTHER VERBAL FORM OR KINESICS*
3. d) *TRANSLATES FROM ONE LEVEL OF ABSTRACTION TO ANOTHER*

3. **TRANSLATION**
Pictures/Directions/
Dramatization/Restatement
K-6

- 3.a)(2) Clip and mount a picture. Discuss what is happening, has happened, will happen. Write your own story. (The primary student may dictate his/her story to the teacher.)
- 3.a)(1) Study the cartoons. Choose an informative piece of material from the group's reading material. Draw a cartoon which refers to an important situation.
- 3.d)(1) Read the weather report. Write a descriptive paragraph about the weather of the day, such as "A Record Snowfall" or "The Tornado." The paragraph might be in poetical form.

SOCIAL STUDIES

- 3.a)(2) Use pictures and newspaper clippings to launch social studies units.
- 3.a)(3) Make a products *map* of a region. Cut pictures from advertisements and paste them on a large wall map of the region; or place the pictures around the map and extend a ribbon from the picture to the map.

Make an import-export *map*. Paste pictures of imports and exports on the map. Outline the imports with red, exports with blue.

Make a personal tour *map*. Choose a person in the news and route his travels on the map.

Use a large world *map*. Place pictures or news items from the paper around the map. Extend the picture to the map by using a ribbon.
- 3.d)(3) Current Events Box: During the week, drop news clippings into a box. At a prearranged time, each student may draw a clipping from the box and be responsible for giving a brief summary of the clipping.
- 3.b)(2) Over a period of time, have students collect recipes of dishes from various countries. The climax of this project might be an International Dinner when each student brings a prepared recipe.

- 3. a) *TRANSLATES FROM VERBAL
FORM TO PICTORIAL AND DIA-
GRAMMATIC FORM AND VICE
VERSA*
- 3. b) *TRANSLATES DIRECTIONS INTO
ACTION OR A PRODUCT*
- 3. c) *TRANSLATES TO ANOTHER
VERBAL FORM OR KINESICS*
- 3. d) *TRANSLATES FROM ONE LEVEL
OF ABSTRACTION TO ANOTHER*

3. TRANSLATION
Pictures/Directions/
Dramatization/Restatement
K-6

3.a)(5) History of the Newspaper: Construct a diorama depicting

How news comes to us today
The town crier of colonial America
The messenger runner of ancient Greece
A modern printing office

SCIENCE

3.a)(4) Study weather maps and list:

causes of different kinds of weather
ways of predicting weather

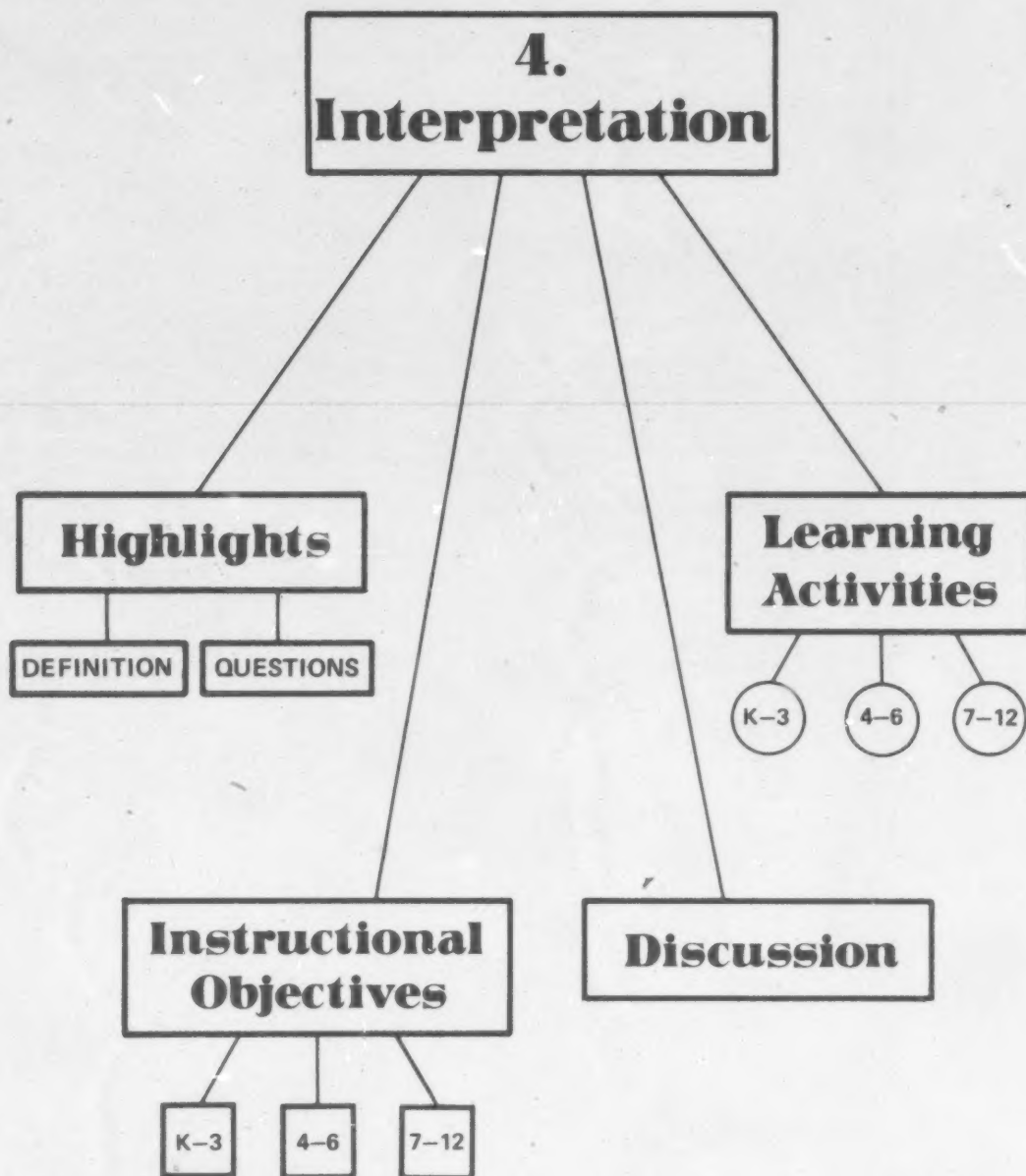
3.c)(1) Dramatize the newspaper account of some scientific event.

3.a)(5) Make graphs showing:

variations in temperature for a month
the wins and losses of Rams
the standing of Rams in their league

FOOTNOTES

1. Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper & Row, Inc., 1966), p. 38.
2. D.C. Reading Center and Department of Elementary Supervision, *Reading Comprehension Skills* (Washington, D.C.: District of Columbia Public Schools, 1971), p. 90.
3. Robert M. Wilson and Marcia M. Barnes, *Survival Learning Materials* (College Park, Md.: Reading Center, College of Education, University of Maryland, 1973), pp. 20-22.
4. Sanders, *Classroom Questions*, pp. 36-38.
5. Bill Martin, Jr. in collaboration with Peggy Brogan, *Sounds of Language Readers* (New York: Holt, Rinehart and Winston, Inc., 1970).
6. PGC, *Vocabulary Handbook for Secondary Reading Teachers* (Upper Marlboro, Md.: Board of Education of Prince George's County, 1968), pp. 119-125.
7. *Ibid.*, pp. 89-90.
8. *Ibid.*, p. 85.
9. *Ibid.*, pp. 86-87.
10. Sanders, *Classroom Questions*, pp. 35-36.
11. MCPS, *492 Ways to Use a Newspaper in the Elementary Classroom*, Bulletin No. 242 (Rockville, Md.: Montgomery County Public Schools, 1970).



4. INTERPRETATION
Highlights

4. INTERPRETS MAJOR IDEAS AND RELATIONSHIPS BETWEEN IDEAS

- Ideas identified
- Ideas explained
- Ideas related to individual's own experiences
- Ideas related to each other
- Extracting the *important* (or essential) from the *less important* (or nonessential)
- Extracting *general ideas* rather than rephrasing the specifics
- *Reasoning* based on common sense
- Emphasis on finding relationships among parts — *not* on a *formal* understanding of the thought processes
- Pattern of thinking predictable — only one or possibly a few correct answers can be *justified*

How does _____ compare with _____?

What is the most important _____?

Is _____ an opinion? _____

Can you draw a conclusion? _____

How does _____ relate to _____?

What can you infer from _____?

What events caused _____?

Can you cite similarities between _____ and _____?

Can you cite differences between _____ and _____?

Instructional Objectives

INTERPRETATION

4. INTERPRETS MAJOR IDEAS AND RELATIONSHIPS BETWEEN IDEAS

Suggested Instructional Level

a) Identifies ideas

- (1) Identifies main idea, theme, or issue
- (2) Identifies or OUTLINES ideas which relate to, are relevant to, and/or develop main idea, theme, or issue
- (3) Identifies fact, historical or scientific truth, reality, possibility
- (4) Identifies fantasy, unreality, impossibility, incongruity
- (5) Identifies opinions
- (6) Identifies values and value judgments
- (7) Identifies elements which contribute to development of a literary plot
- (8) Identifies premises, assumptions (stated and unstated), hypotheses, evidence, arguments, conclusions

b) Discovers relationships between ideas

- (1) Arranges ideas in a logical or chronological sequence
- (2) Compares ideas for similarity, identity, difference, contradiction
 - (a) Classifies
 - (b) Makes analogies
 - (c) Identifies degree of similarity or difference between ideas
 - (d) Relates sets of ideas on specified points
 - (e) Determines independently points on which sets of ideas are comparable and compares them

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*
		*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*

Instructional Objectives

INTERPRETATION (continued)

	Suggested Instructional Level		
	K-3	4-6	7-12
(3) Draws an inference, implication, conclusion, or generalization			
(a) From evidence presented in pictorial form	*	*	*
(b) From evidence presented in verbal form	*	*	*
(c) From evidence presented in statistical or diagrammatic form			*
(4) Locates evidence that supports a given inference, generalization, or conclusion	*	*	*
(5) Locates or supplies examples of a given value	*	*	*
(6) Relates cause and effect			
(a) Given an effect and several possible causes, identifies the most reasonable cause	*	*	*
(b) Given an effect, supplies a possible cause	*	*	*
(c) Given an effect, recognizes single or multiple causes		*	*
(d) Given a chain of causes and effects, recognizes effects that become causes of other effects			*

4. INTERPRETATION

Discussion

Interpretation requires that the reader go beyond rewording, rephrasing, or summarizing. The reader identifies major ideas, supporting ideas, and the relationship between ideas. Many of the comprehension abilities which teachers regularly stress in classroom instruction fit into this Interpretation section. For example:

- Finding the main idea
- Outlining
- Distinguishing fact, fantasy, and/or opinion
- Sequencing
- Classifying
- Making inferences
- Generalizing
- Drawing conclusions
- Relating cause and effect

Interpretation differs from Prediction, Application, Analysis, Synthesis, and Evaluation in that the reader does not extend the meaning of the communication nor does he supply original ideas. The reader does not apply information to new situations (per Application), and he does not establish criteria for making judgments (per Evaluation). However, in order to interpret, the reader *does* call upon his background of experience and his fund of knowledge so that the meaning and intent of the communication may be internalized. Interpretation questions are objective and the pattern of thinking is predictable because there is only one possible route (or perhaps a few) to acceptable answers; and usually only one or possibly a few correct answers can be justified.

Sanders¹ defines six kinds of relationships in Interpretation, and he offers suggestions for teachers on ways questioning strategies can foster such thinking:

Relationship of Comparison

The student determines whether ideas are identical, similar, different, unrelated, or contradictory. He may or may not be asked to support his answer with evidence. An example of a simple form of such questions in social studies would be to tell whether the climate of one area was the same as or different from that of another area. Note that if the student is asked to make the same comparison that he has already read in a textbook, then the activity is not interpretation but merely memory. A second kind of comparison calls for the student to determine degrees of similarity — which of several options are the most similar in a particular characteristic. Again, the teacher may ask the students to present evidence or arguments to defend their choices. Third, the student may be asked to relate two or more sets of ideas on specified points. (The example which Sanders gives, from the social studies, is requiring students to compare Greek and Roman civilizations in regard to religion, architecture, and government.) Finally, the most challenging comparison questions allow the student to determine the topics on which to compare two sets of ideas, with broader and more complex ideas allowing for greater ingenuity.

4. INTERPRETATION

Discussion

Relationship of Implication

Sanders defines an implication as "an idea that follows inevitably from specified evidence. If the evidence is true, then the implication must be true."² In finding an implication, the thought process of deduction is used, although the student may not be aware of this. The deductive thought process involved in finding an implication requires the student to relate new information to knowledge previously learned.

Relationship of an Inductive Generalization to Supporting Evidence

"An inductive generalization differs from an implication in that the latter starts with facts and generalizations and seeks new conclusions that are entailed within them, while the former requires a marshalling of evidence about some members of a class with the object of finding a characteristic of all members, including the ones not observed."³ As stated in the previous section, an implication follows inevitably from the evidence; an inductive conclusion on the other hand is not certain.

Relationship of a Value to an Example of Its Use

The student is given a value and asked to identify or supply an example of its use. The student is *not* asked to *make* an evaluation but rather to *recognize* the use of the value. When the student uses his values to make judgments, such thinking would be classified Evaluation (category 9).

Quantitative Relationship

A student may be asked to utilize given statistical information to draw conclusions. Such questions would not require advanced mathematical skill, since that is not what is being taught or tested. If the student is given statistical information and asked to make a graph showing this information, or if the student is given a graph and asked to restate the given information, such an activity would be classified Translation (category 3) rather than Interpretation.

Relationship of Cause and Effect

Simple recognition of cause and effect is an important part of primary children's interpretive reading as they learn to handle questions beginning with "Why." More sophisticated study of cause and effect at the secondary level would fall into the more advanced category of Analysis. Sanders comments that one problem which teachers face in trying to generate this type of thinking is that a textbook may give the causes of various phenomena; then asking a cause and effect question may merely require the student to locate the information in the text rather than actually surmising the cause himself from the effects given.

**4. INTERPRETS MAJOR IDEAS AND
RELATIONSHIPS BETWEEN IDEAS**

3. INTERPRETATION
Main Idea, etc. (Filmstrip)
4-12

Source: *Developing a Successful School Media Center*^A

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

**4. a) (1) IDENTIFIES MAIN IDEA,
THEME, OR ISSUE**

4. INTERPRETATION
Main Idea
1-6

1. Collect baby pictures and have children write clever captions for them.
2. Pictures of animals in various poses may be used in the same way.
3. Ask pupils to bring to class colored pictures from calendars, magazines, or advertisements. Mount and number all pictures. On worksheets made of sheets of paper numbered to correspond with the pictures, have each student write a caption appropriate to each picture as it is passed along. Later when the pictures are placed on the bulletin board, the captions are read and the one that best shows the main idea of the picture is printed below it.

4. a) (1) IDENTIFIES MAIN IDEA,
THEME, OR ISSUE

4. INTERPRETATION
Main Idea
1-6

4. Match Paragraphs and Titles. Paragraphs from old readers or science books may be pasted on 3x5 cards. Titles that fit these paragraphs are typed on another set of cards with numbers for use in preparing a key. Students may work individually or in pairs, reading the paragraphs and deciding upon the best title for each paragraph. They may write their own paragraphs and titles.

4. INTERPRETATION
Main Idea
4-12

Russell and Karp in *Reading Aids Through the Grades*⁵ suggest the following activity to encourage students to see the main idea of a paragraph.

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

4. a) (2) IDENTIFIES IDEAS WHICH DEVELOP ISSUE

4. INTERPRETATION
Details/Issue
4-6

TWO CONTROVERSIAL POINTS OF VIEW⁶ Facts to substantiate each point of view

The [students] are given a selection to read which expresses two points of view on the same subject. After reading the selection they arrange the facts according to the point of view each supports.

Do you look forward to the day when you can drive a car? Of course you do. Before you start, it is important to take driving lessons, for people think automobiles are both a blessing and a danger.

The [automobile] is a blessing because it helps families to leave the city and go to the country to enjoy trees, birds, and lakes. But such a trip is often hard on the driver because traffic is so heavy near the city that he is worn out after what should have been a holiday.

The automobile is an advantage to people in the country, too. It brings them closer to their neighbors and to the towns where there are big stores and different amusements. The disadvantage in this is that the country people no longer go to their own local stores and so the merchants are forced out of business by the big towns. However, another of the real blessings of the [automobile] is that it helps people to do their business quickly. In addition, people can take their cars and drive many miles; in this way they learn more about their own country and the people in it. At the same time, automobiles are driven so fast and so carelessly that they kill many people every year. Thousands of people are injured in accidents, too. This fact shows why boys and girls should take lessons until they are skilled drivers before they drive on crowded highways.

1. State advantages of automobiles given above.

- 1.
- 2.
- 3.

2. State 3 reasons why automobiles may be harmful.

- 1.
- 2.
- 3.

4. a) (2) *OUTLINES IDEAS WHICH DEVELOP THEME*
 4. b) (5) *LOCATES OR SUPPLIES EXAMPLES OF A GIVEN VALUE*

4. INTERPRETATION
 Outlining/Value
 1-6

Source: *492 Ways to Use a Newspaper in the Elementary Classroom*⁷

4. a) (2)

Choose a news item.
 Outline the main ideas.
 List the supporting facts.
 Try to match the two.
 Assemble the supporting facts under the main ideas in outline form.

4. b) (5)

Study comics and cartoons. Note how much meaning is given by the facial expressions. Practice sketching a face showing surprise, sadness, and other expressions.
 Read a news item. Discuss: What kind of person does the news character seem to be?
 Follow a comic strip character. List characteristics which you think he portrays.

4. a) (2) *OUTLINES IDEAS WHICH DEVELOP MAIN IDEA*

4. INTERPRETATION
 Outlining
 4-12

It is possible that students may be able to answer questions about individual points in reading but still be unable to see the idea as a unified whole.

The teacher may write an outline of a reading assignment and scramble the various points. The student is given a sheet with directions similar to the following:

Directions: Ideas from your reading fit into a logical outline. Enter each point in its proper line of the outline.

- I.
 A.
 B.
 1.
 2.

4. a) (2) *OUTLINES IDEAS WHICH DEVELOP MAIN IDEA*

4. **INTERPRETATION**
Outlining
4-12

II.

A.

B.

III.

A.

B.

C.

The student picks out the main points and writes them next to the Roman numerals. The related subordinate points are put under each main point. The pattern for the subheadings should reveal the way in which the ideas fit into the outline.

4. a) (1) *IDENTIFIES MAIN IDEA, THEME, OR ISSUE*

4. **INTERPRETATION**
Main Idea/Supporting Idea
4-6

4. a) (2) *OUTLINES IDEAS WHICH RELATE TO AND/OR DEVELOP MAIN IDEA, THEME, OR ISSUE*

Ask the students to pick out the main ideas. List them on the board with Roman numerals. Then ask them to pick out the details or supporting ideas. List these on the board under the main headings with capital letters. Use a correct outline form, maintaining parallel structure of the items.

OUTLINE FORM

The following illustrates the form favored by the University of Chicago Press and used by MCPS. Note that the divisional numerals or letters for the top three levels are set off by periods and those for the lower levels by single or double parentheses. Note, also, that Roman numerals are aligned on the following period or parenthesis, since they vary in width.

I.

II.

A.

1.

2.

4. a) (1) *IDENTIFIES MAIN IDEA, THEME, OR ISSUE*
 4. a) (2) *OUTLINES IDEAS WHICH RELATE TO AND/OR DEVELOP MAIN IDEA, THEME, OR ISSUE*

4. INTERPRETATION
 Main Idea/Supporting Idea
 4-6

B.

1.

2.

a)

b)

(1)

(2)

(a)

(b)

i)

ii)

III.

4. a) (3) *IDENTIFIES POSSIBILITY*
 4. a) (4) *IDENTIFIES IMPOSSIBILITY*

4. INTERPRETATION
 Possibility/Impossibility
 K-3

YES OR NO

This activity can be begun with primary students in an oral language situation, with the teacher reading sentences such as those below and the children deciding whether they are true or false. Later the same kinds of sentences can be given out in written form, and the students asked to write "yes" after the sentences that are true and "no" after the ones that are absurd or not true. This activity can be adapted to use in the higher grades by changing the content level of the sentence.

1. A dog can fly. _____
2. A baby is very little. _____
3. Birds like to sing. _____
4. Cookies grow on trees. _____

4. a) (3) *IDENTIFIES POSSIBILITY*
4. a) (4) *IDENTIFIES IMPOSSIBILITY*

4. **INTERPRETATION**
Possibility/Impossibility
K-3

5. Elephants have big ears. _____
6. Snow falls in the winter. _____
7. Lollipops are candy. _____
8. The smell of onions can make you cry. _____
9. The taste of a lemon is sweet. _____
10. Fish can live out of water. _____
11. All oysters have pearls. _____
12. A cat can purr. _____

4. a) (3) *IDENTIFIES REALITY OR FACT*
4. a) (4) *IDENTIFIES UNREALITY OR FANTASY*

4. **INTERPRETATION**
Reality/Unreality
3-12

TO TELL THE TRUTH

The TV panel show can be adapted as a classroom exercise. Select three students, one to be the genuine contestant who is required to tell the truth at all times, and two imposters, who may either lie or tell the truth. They should do considerable lying to make the game interesting. These three students should be given adequate preparation time. The class will ask pertinent questions of the "contestants"; and after a set time, they will be asked to individually select one of the three as the genuine contestant. This exercise could be applied to any subject area, but it would be most effective to use topics that the students have studied recently. Some examples follow:

1. a farmer in ancient Egypt
2. a taxi driver in London
3. Benjamin Franklin
4. a pioneer traveling the Oregon Trail

4. a) (3) *IDENTIFIES REALITY OR FACT*
 4. a) (4) *IDENTIFIES UNREALITY OR FANTASY*

4. **INTERPRETATION**
 Reality/Unreality
 3-12

- 5. a molecule of nitrogen
- 6. a raccoon
- 7. a character in a novel or play
- 8. a comma
- 9. a trombone
- 10. a painting by Van Gogh

This could be adapted to almost any grade level, by selecting appropriate topics.

4. a) (3) *IDENTIFIES FACT, HISTORICAL OR SCIENTIFIC TRUTH, REALITY, POSSIBILITY*

4. **INTERPRETATION**
 Identifying Fact
 7-12

A student may be given a list of statements concerning a body of scientific knowledge with which he has dealt in the classroom and asked to classify them. For example, given a number of statements about electricity, the question might read:

Directions: Indicate whether each of the following statements is:

- a) Factual — found to be true by experiment or observation
- b) Factual — found to be false through experiment or observation
- c) Part of an accepted theory
- d) In contradiction to an accepted theory
- e) True by definition

The student does not necessarily have to evaluate the statements but rather to recognize their function or purpose in the document. In order to do this task, the student would have to know the meaning of such terms as "fact," "experiment," "theory." He would have to be familiar with the body of scientific knowledge from which the statements are drawn; and he would have to have the ability to classify. An example of this kind of activity, using statements drawn from physics, is given in *Formative and Summative Evaluation*.⁸

- 4. a) (3)IDENTIFIES FACTS
- 4. a) (5)IDENTIFIES OPINIONS
- 4. a) (6)IDENTIFIES VALUES

4. INTERPRETATION
Fact, Opinion, or Value
7-12

One of the first requirements for evaluating anything, according to Sanders,⁹ is that students be able to distinguish among facts, values, and opinions.

All values, Sanders believes, are opinions in the sense that values cannot be proven to be true. However, not all opinions are values. Opinions often result from lack of access to information or take the form of predictions.

Three areas of differing points of view exist concerning the nature and source of values. The first relates to the kinds of standards which may be encountered in the interpretation of history. "We hold these truths to be self-evident: that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness." Sanders cites this statement of values from the Declaration of Independence, with the comment that "The authors conceived this to be a law of nature that is correct for all places and all times." The second area of divergency concerns values which relate to a particular culture and which are whatever the society determines them to be, rather than definitions of right and wrong, or good or bad that hold true for all cultures. An example might be the rightness or wrongness of polygamy as viewed by different cultures. Third, is the view that values, standards of right and wrong, are determined by individual taste.

To stimulate discussion on this skill, the teacher might compile a list of statements which could be categorized under "fact," "value," or "opinion that is not a value."

- 4. a) (4)IDENTIFIES INCONGRUITY

4. INTERPRETATION
Incongruity
4-9

Precise Reading Exercise¹⁰

Directions: Read the following sentences. An idea is presented in each that is incongruous with the situation presented. Point out the incongruity and explain it.

1. Jerry was almost finished with his watercolor painting when the storm caused the lights to go out, leaving the house in total darkness. "Oh, well," he sighed, "I'll just add a touch of blue to the sky, and take a rest."
2. The late afternoon sun filled the room. Judy lay across her bed, stroking the neck of her white kitten and then admiring the way its eyes glowed.
3. Mike walked into the air-conditioned soundproof booth to await the signal for entering the space capsule. He could hear the distant chiming of the tower clock.

4. a) (4) *IDENTIFIES INCONGRUITY*

4. **INTERPRETATION**
Incongruity
4-9

4. "Jean," Mrs. Gates rebuked her four-year-old. "When I gave you the banana to eat, I told you to be careful of it. You have let it drip all over the floor."
5. Through the trees one could glimpse the red of the riders' jackets and could hear the persistent baying of the hounds grow steadily louder. The fox continued along the woodland path at a leisurely pace.

(Answers follow)

Answers to Precise Reading Exercise

1. One cannot paint in total darkness, nor can one discern color in darkness.
2. The cat's eyes might have flashed momentarily in the sunlight, but a glow is a continual process and would happen in almost total darkness.
3. The chiming of a clock outside of the room could not be heard since the room is described as "soundproof."
4. Bananas don't drip.
5. Normally, a fox would hurry under such circumstances. There is no information given in the sentence that would indicate that this fox was abnormal.

4. a) (5) *IDENTIFIES OPINIONS*

4. **INTERPRETATION**
Opinion
4-6

JUDGING FACT AND OPINION¹

1. Have students draw a line down the center of a sheet of paper and label one side Facts and the other side Opinions.
2. Have them listen to or read a selection, identify sentences or phrases containing facts or opinions, and enter them in the appropriate columns.

Example: On the fact side might be found the sentence, "He did not speak when the girl was there." On the opinion side might be found, "He is bashful."

4. a) (5) IDENTIFIES OPINIONS

4. INTERPRETATION

Opinion

4-6

3. Students should be prepared to defend their judgments:
4. Through discussion, it can be brought out from comparing many examples that
 - a) Facts may be classed as historical, observable, and experimental.
 - b) A fact is not true for all time. (It looked as though the world were flat; it looked as though the atom could not be split.)
 - c) The best quality of opinion is based on the best quality and quantity of facts available so far.
 - d) In the light of new evidence, this opinion may well need to change.
 - e) Refusal to change opinion may lead to prejudice.
 - f) Opinion should not pretend to be fact.

5. Students may enjoy the following rhyme by an unknown author:

Opinions
Alas, that the strongest
Are often the wrongest.

6. Discussion might end on the note that sometimes all we can have is opinion. "That is the most beautiful sunset I've ever seen." It would be difficult to construct an accurate test of beauty. Pupils may wish to put their ideas about standards for facts into chart form for reference.
7. To apply their standard for facts, two pupils of approximately equal oral language ability may describe the same happening (an exciting game, an assembly program, a classroom incident, or a story the rest of the class has placed before them for reference). Tape the two reports, if possible, for playback. After the class has listened to both reporters, have the pupils compare the two versions of what happened regarding quality of observation, facts, and opinions.

4. a) (8) IDENTIFIES PREMISES, ASSUMPTIONS (STATED AND UNSTATED), HYPOTHESES, EVIDENCE ARGUMENTS, CONCLUSIONS

4. INTERPRETATION

Identifying Elements

9-12

Some suggestions for questions which secondary science and social studies teachers may find useful are found in *Formative and Summative Evaluation*, pp. 181-185.¹²

Details about these questions include:

4. a) (8) *IDENTIFIES PREMISES, ASSUMPTIONS (STATED AND UNSTATED), HYPOTHESES, EVIDENCE ARGUMENTS, CONCLUSIONS*

4. **INTERPRETATION**
Identifying Elements
9-12

- Criteria on which to base decisions about whether or not information is factual
- The background of vocabulary and concepts which are necessary in order to identify premises, evidence . . .
- The types of clues students need to recognize in order to interpret
- Rationale for allowing students to have the original information ready for easy reference when responding to questions rather than relying on memory about that information

4. b) *DISCOVERS RELATIONSHIPS BETWEEN IDEAS*

4. **INTERPRETATION**
Relates ideas
K-6

Source: MCPS Language Arts Mini-Report, March 1970, "Look At Me, Teach'." (If this Mini-Report is not available in your school, it may be obtained from the teacher specialist in your area office.)

8. Uses appropriately basic concepts of

a) Time (including orientation and sequence)

- (1) Recognizes and uses such things as clock units, calendar units
- (2) Recognizes and uses concepts of time orientation and sequence such as now, then, before, after, long ago, A.D.
- (3) Sequences events chronologically
- (4) Responds to and uses concepts of frequency such as often, seldom, occasionally, temporarily, intermittently
- (5) Responds to and uses concepts of imminence such as soon, immediately, sometimes, never, surely

b) Space (including orientation and relationships)

- (1) Demonstrates in relation to self or other objects such concepts as here, there, up, down, in front of, behind, beside, under, over, around, between, near, far
- (2) Uses concepts of spatial orientation and relationships

4. b) *DISCOVERS RELATIONSHIPS BETWEEN IDEAS*

4. **INTERPRETATION**

Relates ideas

K-6

c) Size (including relative size) and measurement

- (1) Distinguishes the large, small, medium-sized objectives from a group of three objects of different sizes but identical shapes
- (2) Identifies the largest and the smallest from a group of more than three objectives of different sizes, but identical shapes; orders by size
- (3) Uses units of measurement to define the dimensions of objects
- (4) Uses units of volume to determine relative sizes of objects of different shapes

d) Shape and dimension

- (1) Recognizes and uses concepts of shape of two-dimensional figures: circle, square, triangle, polygon, etc.
- (2) Recognizes and uses concepts of shape of three-dimensional objects: cube, ball or sphere, cone, pyramid, etc.

e) Relative number or amount

- (1) Uses terms of number appropriately: one, many, few, most, more
- (2) Uses terms of amount appropriately: much, little, more

f) Texture

- (1) Identifies surfaces that are rough, smooth, prickly, slippery, sticky
- (2) Describes in terms of texture
- (3) Constructs or creates the illusion of texture

g) Taste and smell

- (1) Identifies instances of kinds of taste and smell: sour, sweet, mild
- (2) Appropriately labels sensations

h) Color

- (1) Identifies colors
- (2) Sorts objects by color
- (3) Matches objects with their common coloration: grass — green, milk — white

4. b) *DISCOVERS RELATIONSHIPS BETWEEN IDEAS*

4. **INTERPRETATION**
Using the Newspaper
K-6

The following suggestions appropriate to the skill of relating ideas are from *492 Ways to Use a Newspaper in the Elementary Classroom*.¹³

4. b) (2) (a) Classifying

Find pictures of a certain topic, such as:

animals in the news
children in the news
homes in the news
occupations in the news

pets
people
foods
toys

Collect words that have different connotations, such as:

action words
colorful words
angry words

exciting words
happy words

Clip advertisements, pictures, and news items demonstrating methods, instruments, and chemicals used in

heating our homes
cooling our homes

painting our homes
caring for our lawns

Make a bulletin board, chart, or scrapbook of news about devices that will improve efficiency and safety

in the home
in cars

in air and water travel
in industry

Collect pictures and items concerning a chosen state. Classify them as:

state parks
cities of the state
educational institutions
topography and scenic beauty
occupations and industries

Study editorials. Try to classify them as to whether they are written

to inform the reader
to interpret to the reader

to entertain the reader
to influence the reader's opinion

4. b) *DISCOVERS RELATIONSHIPS BETWEEN IDEAS*

4. **INTERPRETATION**
Using the Newspaper
K-6

4. b) (2) (d) Comparing on specified points

Use a variety of reports on market price, supply, and shipment of products such as wheat, corn, oil, etc. Keep in mind that it takes a variety of conditions and cooler climate as well as tropical regions to produce the products consumed by the people of the United States.

4. b) (3) Inferring

Read the "Classified Ad" section and select an ad. Discuss what might have prompted the person to place the ad.

Clip editorial cartoons. Interpret the cartoon. Try to find the matching editorial.

Study and interpret pictures of a region. An opaque projector may be used. Draw inferences from the pictures, such as:

manner of living	topography
climate	natural resources

4. b) (3) Drawing an implication

Choose a news item, cartoon, or editorial. Discuss how that item would appear in a paper of a country under a dictatorship. Reproduce the item as you think it might appear in that country.

4. b) (3) Generalizing

Study charts and graphs, such as those showing:

the increase of population
government expenditures
price trends

Discuss how people made adjustments to these trends.

Study and interpret graphical presentations showing trends in the production of one crop. Discuss how man must adjust his way of earning a livelihood.

4. **INTERPRETATION**
Relating ideas
9-12

The following suggestions are appropriate to the content of the Work Oriented Curriculum, Secondary Level:

4. b) *DISCOVERS RELATIONSHIPS BETWEEN IDEAS*

4. **INTERPRETATION**
Relating ideas
9-12

Objective 4. a) (1) Outlines ideas which are relevant to issue

- Characteristics of skilled, semi-skilled, and unskilled occupations

Objective 4. b) (2) Compares ideas for similarity or difference

- Similarities and differences in types of businesses
- Types of items common to all job application forms

Objective 4. b) (2) (a) Classifies

- The classification of jobs
- Diverse ways of classifying

Objective 4. b) (3) Draws an implication or conclusion

- Relationships between types of businesses and resulting implications for person seeking job

4. b) (1) *ARRANGES IDEAS IN A LOGICAL OR CHRONOLOGICAL SEQUENCE*

4. **INTERPRETATION**
Sequence
K-6

On the lower level of simple Location and Recall, students should gain some awareness of sequence as they are asked to locate specific events or actions in a story with questions like "What happened to her next?" or "What was the first thing _____ did? What was the second thing he did?" or "What happened to _____ after _____?" [See Section 2. a) (1).] At the Translation level, students may be asked to draw a picture from verbal information of an idea or sequence of ideas. [See Section 3. a) (1).] In both of these activities, the sequence is clearly indicated in the communication; and the students are being asked only to locate and translate it. This category (Interpretation) includes the kind of thinking that would enable the student to discern a logical or chronological sequence which is not clearly indicated in the written communication. One way to introduce this is through the use of comic strips and news items.

From *492 Ways to Use a Newspaper in the Elementary Classroom*.¹⁴

- Find the sequence of a comic strip. Cut up the strip into its parts. See whether you can assemble them in a logical or chronological sequence.

4. b) (1) **ARRANGES IDEAS IN A LOGICAL OR CHRONOLOGICAL SEQUENCE**

4. **INTERPRETATION**
Sequence
K-6

- Read a news item. See whether you can write the main events in chronological order.
- Read a news item with your class. List the happenings in sequential order. Develop these facts into a summarizing paragraph.

Mixed-up Comic Books

From finding the sequence in a single comic strip, students can progress to finding sequence in a whole comic book. Unstaple old comic books and cut the pages apart. Cut off the corner of the page where page numbers appear and shuffle the pages. Students must then attempt to unscramble them. A duplicate comic book serves as a key. As students progress, they may be able to reassemble an entire book.

What Are They Saying?

Choose a comic strip which has a definite sequence and much conversation. Cut the conversation from the balloons and reproduce the strip on an overhead projector. Have the students conjecture what the characters might be saying to each other. Mix up the frames and have students reassemble them before making up the dialogue. Try this also as a written exercise with duplicated comic strips.

Listen for Sequence!

Take a favorite or familiar fairytale or short narrative and cut it into strips, taking care that the division is at places where the next sentence is clearly indicated. Pass out individual parts to each student. The teacher keeps the beginning part and reads this part aloud. Ask whether someone has the next part, and let him/her read it aloud. As students read their parts, the others listen for sequence. Be sure to begin with easy selections.

As students become more skilled at this activity, the cuts may be made more difficult (for example, in the middle of a sentence); and students may be asked to listen so carefully that when the reader stops, the next person can pick up the reading immediately with no hesitation.

4. **INTERPRETATION**
Sequence
7-12

Below is an alphabetical list of the 30 largest cities in the United States in 1850 and the population of each.¹⁵ First, group these cities in the six categories listed below and give each one its appropriate symbol. Next, locate these cities in an atlas or book with an accurate map of the United States. Then, place a symbol on the attached outline map at the location of each city, and name the city. Be careful not to crowd the symbols in the northeast corner of the United States on your outline map.

United States Cities of 1850



4. b) (1) *ARRANGES IDEAS IN A LOGICAL OR CHRONOLOGICAL SEQUENCE*

over 200,000	○
100,000 – 200,000	□
50,000 – 100,000	☆

Albany, N.Y.	51,000
Baltimore, Md.	169,000
Boston, Mass.	137,000
Buffalo, N.Y.	42,000
Cambridge, Mass.	15,000
Chicago, Ill.	30,000
Cincinnati, Ohio	115,000
Cleveland, Ohio	17,000
Columbus, Ohio	18,000
Detroit, Mich.	21,000
Louisville, Ky.	43,000
Milwaukee, Wisc.	20,000
Mobile, Ala.	21,000
Newark, N.J.	39,000
New Bedford, Mass.	16,000

4. *INTERPRETATION*
Sequence
7-12

30,000 – 50,000	■
20,000 – 30,000	●
under 20,000	▲

New Haven, Conn.	20,000
New Orleans, La.	116,000
New York, N.Y.	696,000
Philadelphia, Pa.	121,000
Pittsburgh, Pa.	47,000
Providence, R.I.	42,000
Richmond, Va.	28,000
Rochester, N.Y.	36,000
San Francisco, Calif.	35,000
Savannah, Ga.	15,000
St. Louis, Mo.	78,000
Syracuse, N.Y.	22,000
Washington, D.C.	40,000
Wilmington, Del.	28,000
Worcester, Mass.	17,000

4. b) (2) *COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION*

4. *INTERPRETATION*
Comparisons
K-6

PICTURES FOR A BEGINNING: Have two columns of pictured objects. Student draws a line from one in the first column to one associated with it in the second column. For example, given a word (picture) such as cup, student finds something that goes with it — saucer.

DISCUSSION, PICTURES, OR WORDS: In the first column are things that are grown, that we get from animals, or that we get from the ground. In the second column are products that are made from the things in the first column. Beside each word or picture in the first column, tell, draw, or write the name of a product that is made from it.

In order to do this exercise, it is of course essential that the students have these words in their oral vocabulary. (See Category 1, **WORD MEANINGS**.)

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparisons
K-6

1. milk	sauce
2. corn	book
3. wheat	butter
4. apples	sweater
5. trees	bread
6. vegetables	dress
7. grass	flour
8. oranges	stove
9. leather	lumber
10. lead	pencil
11. iron	soup
12. cotton	shoe
13. wool	hay
14. paper	juice

ASSOCIATIONS

When you read a word in the first column, what words in the second and third columns do you think about?

1. shoemaker	books	grass
2. library	tea	trees
3. postman	leather	teeth
4. baker	whistle	tools
5. fireman	shoes	wood
6. policeman	mailbag	people
7. zoo	bread	automobiles
8. park	letters	feathers
9. dentist	engine	houses
10. doctor	brass buttons	buses
11. carpenter	monkeys	fur
12. city	horses	milk
13. cow	rolls	meat
14. indian	smoke	play
	elephants	peanuts

COMPLETE THE IDEA

Tell, or write in the blank, a word that goes with the other word and is often connected by *and*:
(Answers will vary.)

cup and _____

bread and _____

red, white, and _____

_____ and fork

black and _____

meat and _____

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparisons
K-6

to _____ a sandwich
to _____ a kite

day and _____

CRITTER NOISES

Write what each bird, animal, or insect does.

- | | | | |
|-------------|-----------|---------------------|----------|
| 1. monkeys | (chatter) | 10. oxen and cattle | (low) |
| 2. wolves | (howl) | 11. crickets | (chirp) |
| 3. cats | (mew) | 12. lions | (roar) |
| 4. ducks | (quack) | 13. horses | (neigh) |
| 5. hens | (cackle) | 14. turkeys | (gobble) |
| 6. roosters | (crow) | 15. bears | (growl) |
| 7. sheep | (bleat) | 16. frogs | (croak) |
| 8. pigeons | (coo) | 17. bees | (buzz) |
| 9. geese | (hiss) | | |

WORD GAMES

Which words go together?

- | | |
|-------------|----------|
| 1. shoe | class |
| 2. cup | cat |
| 3. moon | pepper |
| 4. boy | girl |
| 5. knife | butter |
| 6. salt | stocking |
| 7. bread | fork |
| 8. dog | saucer |
| 9. bird | nest |
| 10. teacher | |

Which word in each group does not belong?

- | | | | |
|------------|---------|-------|-----------|
| 1. cup | dish | glass | cake |
| 2. cow | robin | sheep | horse |
| 3. apple | orange | lemon | milk |
| 4. violet | lily | rose | house |
| 5. teacher | fireman | cow | policeman |
| 6. penny | mouse | dime | nickel |
| 7. hen | turkey | cat | duck |
| 8. house | train | car | bus |

4. b) (2) *COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION*

4. **INTERPRETATION**
Comparisons
K-6

Add a word to each group:

1. cow	horse	_____	four
2. lion	tiger	_____	silo
3. milk	cocoa	_____	penny
4. dime	nickel	_____	elephant
5. potato	cabbage	_____	sheep
6. barn	stable	_____	water
7. fireman	policeman	_____	lettuce
8. six	three	_____	postman

Draw a line from each word on the left to the word on the right that goes with it.

dogs	bleat
cats	roar
horses	mew
monkeys	neigh
lions	chatter
sheep	bark
	black

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

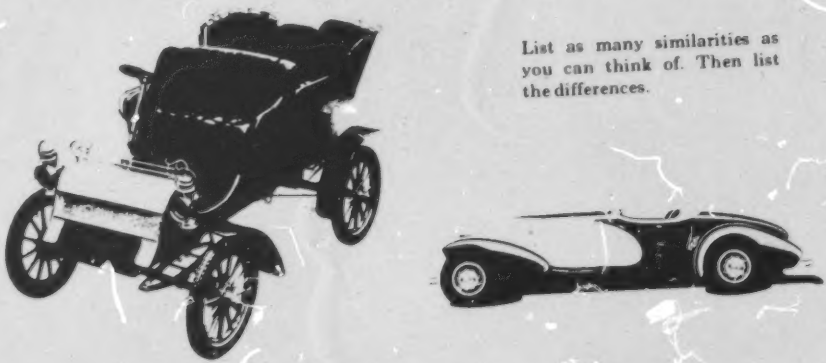
4. INTERPRETATION
Comparison
5-9

Source: *Thinking Box*¹⁶

COMPARING

Compare a sports car with a Model-A Ford.

RECREATION
3
Activity



List as many similarities as you can think of. Then list the differences.

RECREATION
3
Analysis

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COMPARING

Have you thought about comparing these two autos with respect to their appearance? Do you include comparisons of their value, cost, type of engine, maneuverability, miles per gallon of gasoline, smoothness of ride? (But perhaps you did not wish to include any of these points in your comparison. You are the one to decide what you will include.)

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparison
5-9

Source: *Thinking Box*¹⁷

COMPARING

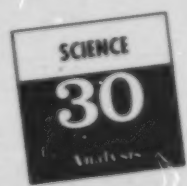


SCIENCE
30
Activities

Compare a calendar with a clock.
List as many similarities and differences as you can think of.

Artist: George Rubner

COMPARING



SCIENCE
30
Analysis

© MCGRAW-HILL Book Co.

Have you thought of comparing those two items according to their functions? Did you include comparisons of size, shape, usefulness, material from which each is made, durability? (But perhaps you did not wish to include any of these items in your comparison. You are the one to decide what you will include.)

4. b) (2)(a) CLASSIFIES

4. INTERPRETATION Classification K-6

A TRUE STORY — from a MCPS classroom

Snap Solution¹⁸

Tammy, Mary, and Linda were independently playing "Categories" while their classmates engaged in other activities. Tammy, who was blindfolded, was reaching into a shoe-box, selecting one item, feeling it, and categorizing it. The categories she had chosen were *hard, soft, and flexible.*

Mary and Linda were receiving the items and placing them into piles according to the category selected by Tammy. The activity was proceeding rapidly with items easily falling into one of the three categories until Tammy selected the last item, a small wooden stick with cotton tips. She tested the stick for flexibility, but tested too hard. The stick snapped. She responded, with only slight hesitation, "BREAKABLE!"

The following is a list of some of the many things which might be found at home and in school which can be grouped by primary students.

- pictures
- story books
- crayons
- buttons
- blocks
- classroom tools
- vocabulary words
- foods
- jobs of the parents

- models
- pictures of toys (airplanes, boats, cars, animals)
- pictures of vehicles used for transportation
- pets of children
- weather
- musical instruments
- numbers
- activities children engage in after school

CLASSIFICATION GAMES

Divide the pocket chart into four columns. In each of the first three columns place three related word cards. Leave the fourth column blank, and have the students select from their envelopes a word card that belongs in the same class as the other three words in that row. Example:

4. b) (2)(a) CLASSIFIES

car, boat, airplane, _____
 bell, top, doll, _____
 Susan, Bill, Kathy, _____
 walk, gallop, skip, _____
 red, blue, green, _____

4. INTERPRETATION Classification K-6

VARIATIONS

- A. Instead of filling in the missing words, use four words in which one does not fit. Have the students remove the "misfit."
- B. The teacher prepares a list of words that can be separated into two or more categories. Students arrange these words in the proper groupings. Categories may be written on small boxes:

VEGETABLE

HOUSE

TRANSPORTATION

Words may be written on separate word cards:

cabbage
 roof
 automobile
 horse
 ceiling

radish
 carriage
 windows
 potatoes
 bike

Place the word card in the right box.

CLASSIFICATIONS

Topics which may be used for classification are listed below. These topics differ markedly in concept level. Pocket folders, labeled boxes, and envelopes could be useful in providing self-checking learning activities for the students.

Action Words

Activities

Animals — Domesticated and Wild

Birds

Bodies of Water

Books

City and Country

City and State

Clothing

Colors

Communication

Contemporary People

Customs

Dogs

Elements and Compounds

Explorers

Famous Historical Men and Women

Farm Activities

Fish

Flags

Flowers

Food

Fruit

Games

Geographical Locations

Holidays

Homes

Insects

Inventions

Inventors

Islands

Machines

Math

Mountains

Musical Instruments

Now and Then

Occupations

People

Plants

4. b) (2)(a) CLASSIFIES

Playgrounds
Poems
Products
Proverbs
Reptiles
Rivers
Schools
Seasons
Shells

Sports
States
Stories
Substances (Animal,
Vegetable, Mineral)
Time
Toys
Transportation
Vegetables

Vocabulary Words
Weather
We Run — We Fly
Things to Eat
Things That Float
Things That Soar
Things to Wear
Things with Wheels
Things with Wings

4. INTERPRETATION Classification K-6

4. INTERPRETATION Classification 4-8

WHAT'S THE CATEGORY?¹⁹ (Grades 4-8)

Make a list of sets of words. Each set contains four words, all of which can be grouped into a single category.

Example:

1. factory, barn, house, silo
2. car, bus, boat, plane
3. ring, bracelet, necklace, [earrings]
4. pint, yard, bushel, inch
5. penny, nickel, dime, quarter
6. wheat, corn, oats, barley
7. boot, shoe, sock, slipper
8. baseball, golf, tennis, hockey
9. Washington, Monroe, [Hoover,] Johnson
10. chocolate, licorice, jellybean, lollypop
11. George, Albert, Sally, Stella
12. love, happiness, hate, fright
13. hammer, saw, rake, hoe
14. Halloween, Thanksgiving, Easter, [Chanukah]
15. fly, ant, bee, mosquito
16. tree, grass, rose, tomato
17. orange, purple, green, red
18. table, chair, couch, bed
19. taste, touch, smell, sight
20. ocean, river, lake, sea

(buildings)
(vehicles)
(jewelry)
(units of measure)
(coins)
(grain)
(footwear)
(sports)
(presidents)
(candy)
(names)
(feelings)
(tools)
(holidays)
(insects)
(plants)
(colors)
(furniture)
(senses)
(bodies of water)

4. b) (2)(a) CLASSIFIES

21. cinnamon, cloves, nutmeg, ginger
22. circle, square, oval, triangle
23. cake, pie, ice cream, cookies
24. Mars, Jupiter, Neptune, Saturn
25. wall, fence, dam, dike

(Insist on precise answers.)

4. 4. INTERPRETATION

Classification

4-8

4. INTERPRETATION

Classification

5-9

Source: *Thinking Box* 20

MUSIC-ART
31
Activities

CLASSIFYING

Classify the following:

Banjo sax rock & roll I-chop nature Dances modern guitar piano violin	G-did Steps in of Silence Blues coming dance tempo Blues & Gospel fast melody tempo	blues trio Beethoven flute string mouthpiece chord organ electronic drum	trumpet saxophone Clarinet overture band jazz music music
--	--	---	--

MUSIC-ART
31
Analysis

© HOLT, RINEHART & WATSON

Why did you group these items in that way? In what other ways can these terms be grouped?

4. b) (2)(b) MAKES ANALOGIES

4. INTERPRETATION

Analogies

4-12

Analogies

The analogy is a good technique for framing questions that will help students to see varied relationships. This requires students to make an inference in the basic pattern of "A is to B as C is to D." A and B should be related to each other in the same way that C and D are related, and B should be in the same class as D.

Analogy question patterns may vary:

- "A is to B as C is to _____."
A is to B as _____ is to D, as _____ is to F.
A and B are to C, as D and E are to _____.
A but not B is to C, as D but not _____ is to F."²¹

Sanders points out that this range of complexity makes the analogy appropriate for all grade levels. He also gives some suggestions to help teachers in composing analogy questions, as well as comments on faulty analogies. Sanders stresses the need for explaining the nature of an analogy and encourages class practice in this type of thinking before students are expected to handle analogies independently.

A good source for simple analogy questions at the primary and intermediate levels is the publication *Highlights for Children*.

4. INTERPRETATION

Analogies

4-9

Directions: Look for the word that will go in each of these sentences.²²

- a. Dog is to *run* just as *bird* is to _____.
walk fly run
- b. Word is to *day* just as *sleep* is to _____.
night morning bed
- c. Car is to *land* just as *boat* is to _____.
television water man
- d. Dress is to *cotton* just as *chair* is to _____.
paper wood bird
- e. Boy is to *house* just as *cow* is to _____.
candy nose barn
-

4. b) (2)(b) MAKES ANALOGIES

4. INTERPRETATION

Analogies

4-9

Read each sentence. Think how the first two underlined words go together. Can you think of a word that will go with the third underlined word?²²

- a. Cat is to animal just as black is to _____.
- b. Airplane is to sky just as bus is to _____.
- c. Bird is to fly just as worm is to _____.
- d. Toy is to marbles just as pet is to _____.
- e. Window is to house just as toe is to _____.

Find a word in the word box that will go with the underlined word.²²

- a. Blow is to blew just as feed is to _____.
- b. Strong is to weak just as huge is to _____.
- c. Answer is to reply just as frighten is to _____.
- d. Clear is to plain just as ready is to _____.
- e. Sheep is to lamb just as deer is to _____.

prepared	fed	scare	tiny	fawn
----------	-----	-------	------	------

4. b) (2)(b) MAKES ANALOGIES

4. INTERPRETATION
Analogies
4-9

Read and choose the right word.²²

- | | | | |
|--|--------|-----------|--------|
| a. Tuna is to fish as ivy is to | coat | animal | plant |
| b. Carol is to song as myth is to | play | story | prayer |
| c. Sandal is to shoe as robin is to | bird | wing | blue |
| d. Glove is to hand as shoe is to | finger | kitten | foot |
| e. Pork is to pig as beef is to | steer | chicken | eat |
| f. Suitcase is to baggage as chair is to | store | furniture | paper |
| g. Herd is to cattle as flock is to | fire | birds | people |
| h. Cut is to scissors as slice is to | boat | knife | beast |
| i. Yard is to length as pounds is to | pour | steak | weight |
| j. Nest is to bird as den is to | lion | story | rabbit |

Read these sentences and supply the missing word.²²

- a. Sing is to sang as blow is to _____.
- b. Tiny is to huge as answer is to _____.
- c. Blow is to horn as beat is to _____.
- d. Horse is to colt as bear is to _____.
- e. Run is to ran as shoot is to _____.
- f. Robin is to bird as ant is to _____.
- g. Wet is to river as dry is to _____.
- h. Taxi driver is to taxicab as pilot is to _____.
- i. Start is to finish as forget is to _____.
- j. Automobile is to transportation as house is to _____.

4. b) (2)(b) MAKES ANALOGIES

4. INTERPRETATION

Analogies

7-3

Find a word in the box below that will relate to the underlined word.²²

- a. Plank is to board just as stone is to _____.
- b. Correct is to mistake just as press is to _____.
- c. Head is to jaw just as arm is to _____.
- d. Inch is to length just as ton is to _____.
- e. Disappoint is to satisfy just as humiliate is to _____.

wrinkle

weight

pebble

elbow

praise

ANALOGY: Completion exercise (Suggested level: Junior High)²³

Directions: Choose from one of the three columns the word which best completes the sense of each sentence.

- | | | | |
|--|----------|----------|----------|
| 1. Fawn is to deer as cub is to | rabbit | bear | dog |
| 2. Hat is to head as gloves are to | hands | feet | legs |
| 3. Teacher is to school as nurse is to | church | bank | hospital |
| 4. Writer is to story as artist is to | picture | book | weather |
| 5. Ham is to eggs as ice cream is to | cake | bacon | potatoes |
| 6. Flower is to flour as ate is to | either | eight | height |
| 7. Busy is to idle as strict is to | lecture | leisure | lenient |
| 8. Penny is to nickel as nickel is to a | dollar | dime | quarter |
| 9. Jazz is to music as ballet is to | dance | drama | dream |
| 10. Carpet is to floor as drapes are to | windows | chair | table |
| 11. Enemy is to foe as work is to | leisure | rest | toil |
| 12. Spatula is to cooking as brush is to | painting | singing | dancing |
| 13. Girl is to niece as boy is to | uncle | nephew | cousin |
| 14. Pattern is to dress as recipe is to | cake | cape | cafe |
| 15. Five is to seven as eleven is to | twelve | fourteen | thirteen |
| 16. Saw is to was as net is to | tent | met | ten |
| 17. Bath is to bathe as cloth is to | clothes | clothe | clot |
| 18. Bark is to tree as husk is to | corn | orange | crab |

4. b) (2)(b) MAKES ANALOGIES

19. Aroma is to fragrance as comprehend is to
20. Sandal is to shoe as biscuit is to
21. Pitcher is to baseball as quarterback is to
22. Fur is to beaver as fleece is to
23. Navigator is to ship as aviator is to
24. Taste is to waste as hay is to
25. Photographer is to camera as conductor is to
26. Water is to hose as blood is to
27. Eye is to eve as did is to
28. Take is to taken as hide is to
29. Star is to constellation as flower is to
30. Read is to wind as bass is to

understand	undertake	undergo
flour	bakery	bread
basketball	football	hockey
sheep	monkey	cow
auto mobile	locomotive	airplane
who	why	way
baton	battery	bacon
artillery	artist	artery
top	tot	dad
hides	hidden	hid
bouquet	fragrance	carnation
ready	baritone	wound

Answers

- | | | | | |
|-------------|--------------|--------------|----------------|-------------|
| 1. bear | 7. lenient | 13. nephew | 19. understand | 25. baton |
| 2. lands | 8. quarter | 14. cake | 20. bread | 26. artery |
| 3. hospital | 9. dance | 15. thirteen | 21. football | 27. dad |
| 4. picture | 10. windows | 16. ten | 22. sheep | 28. hidden |
| 5. cake | 11. toil | 17. clothe | 23. airplane | 29. bouquet |
| 6. eight | 12. painting | 18. corn | 24. way | 30. wound |

4. INTERPRETATION Analogies 7-12

MORE ANALOGIES

- | | | | |
|--|-----------|---------|----------|
| 1. General is to army as admiral is to | ship | officer | navy |
| 2. Garage is to car as hanger is to | pilot | engine | airplane |
| 3. Calf is to cow as kid is to | lamb | child | goat |
| 4. Trunk is to tree as stem is to | thickness | flower | root |
| 5. Sour is to lemon as sweet is to | salt | pickles | candy |

4. b) (2)(b) MAKES ANALOGIES

6. Bat is to baseball as racket is to
7. Clock is to time as thermometer is to
8. Scissors are to cut as ax is to
9. Fang is to snake as sting is to
10. Beetle is to insect as salmon is to
11. Minister is to church as doctor is to
12. Cider is to apple as wine is to
13. Movie is to theater as circus is to
14. Mustache is to lip as beard is to
15. Crawl is to caterpillar as waddle is to
16. Thrice is to three as twice is to
17. Hair is to dog as feathers are to
18. Pointed is to pyramid as rounded is to
19. Cave is to bear as nest is to
20. Water is to liquid as iron is to
21. Earth is to mole as water is to
22. Cold is to freeze as heat is to
23. Bird is to orange as shell is to
24. Caterpillar is to butterfly as tadpole is to
25. Cargo is to ship as load is to

<i>tennis</i>	game	court
rain	<i>temperature</i>	wind
sharp	tree	<i>chop</i>
<i>wasp</i>	hurt	poison
river	<i>fish</i>	food
medicine	disease	<i>hospital</i>
glass	purple	<i>grape</i>
clown	parade	<i>tent</i>
whiskers	<i>chin</i>	forehead
<i>duck</i>	kangaroo	snake
one	<i>two</i>	second
hat	<i>bird</i>	plume
chimney	<i>dome</i>	circle
home	tree	<i>bird</i>
<i>solid</i>	metal	ship
ocean	burrow	<i>fish</i>
ice	<i>melt</i>	warm
gun	beach	<i>walnut</i>
tractor	<i>frog</i>	crawl
hay	heavy	<i>truck</i>

4. INTERPRETATION Analogies 9-12

ANALOGY: Completion exercise²⁴

Directions: Complete the relationship in each of the following items by drawing a line under the correct answer.

1. composer: music:: choreographer:
 1. drama
 2. prose
 3. dance
 4. ballad
2. physician: stethoscope:: astronomer:
 1. microscope
 2. telescope
 3. spectroscope
 4. tachistoscope
3. cartographer: map:: architect:
 1. thermostat
 2. mural
 3. edition
 4. blueprint

4. b) (2)(b) MAKES ANALOGIES

4. INTERPRETATION
Analogies
7-12

4. saturated: dessicated:: ravenous:
1. taciturn 2. gregarious 3. verbose 4. disparage
5. reluctant: hesitant:: miserly:
1. extravagant 2. parsimonious 3. miserable 4. extraneous
6. awl: feather:: stylus:
1. canvas 2. water 3. stencil 4. slate
7. venison: deer:: veal:
1. heifer 2. ram 3. ewe 4. calf
8. spider: arachnid:: whale:
1. mammal 2. rodent 3. aves 4. arthropod
9. rabbit: warren:: bird:
1. hutch 2. rumada 3. lair 4. aviary
10. mendacious: voracious:: homogeneous:
1. voracious 2. vacuous 3. decorous 4. heterogeneous
11. machete: hewing:: abacus:
1. computation 2. contemplation 3. concluding 4. confirmation
12. sabot: brogan:: tarantella:
1. spider 2. whirling 3. arachnid 4. fandango
13. tachometer: speed:: chronometer:
1. temperature 2. time 3. depth 4. velocity
14. ornithologist: birds:: paleontologist:
1. posterity 2. fish 3. flora 4. fossils
15. pain: sadist:: pleasure:
1. masochist 2. hedonist 3. atheist 4. philanthropist
16. phrenology: skull:: chiromancy
1. mind 2. time 3. palm 4. carapace
17. chiropodist: podiatrist:: dentist:
1. orthodontist 2. ophthalmologist 2. geriatrician 4. pediatrician

4. b) (2)(b) **MAKES ANALOGIES**

4. **INTERPRETATION**

Analogies

9-12

18. polygamy: marriage:: polyglot:
1. truth 2. mottle 3. history 4. language
19. swastika: Nazism:: caduceus:
1. law 2. fascism 3. medicine 4. Buddhism
20. ran: runs:: left:
1. right 2. lefts 3. leaves 4. leave

ANALOGY: Completion Exercise²⁵

Directions: The first pair of words in each of the following questions has a specific relationship. Underline one of the numbered pairs of words which has the same relationship.

1. nadir: apex::
1. middle: center 2. exterior: interior 3. annex: append
2. physician: patient::
1. minister: preacher 2. lawyer: client 3. composer: conductor
3. minute: refuse::
1. flour: flower 2. bow: wound 3. present: desert
4. grapes: vineyard::
1. lemons: citrus 2. peaches: orchard 3. grapes: wine
5. vulpine: fox::
1. bovine: cow 2. ravine: cattle 3. ovine: wool
6. mason: trowel::
1. judge: court 2. mathematician: sliderule 3. painter: mural
7. pugilist: ring::
1. scientist: laboratory 2. cobbler: shoe 3. jurist: jury
8. affluent: prosperous::
1. capitalist: prosperity 2. approval: approbation 3. sentiment: callousness
9. act: drama::
1. book: thesaurus 2. behave: misbehave 3. chapter: book
10. apprentice: artist::
1. intern: doctor 2. superintendent: task 3. mechanic: secretary

4. b) (2)(b) *MAKE ANALOGIES*

4. INTERPRETATION
Analogies
9-12

11. olfactory: smell::
1. sensation: feel 2. gustatory: taste 3. oratory: hear
12. serene: serenity::
1. cite: citation 2. legal: legitimate 3. infamous: infamy
13. cravat: neck::
1. tactile: finger 2. garment: raiment 3. gauntlet: hand
14. epitaph: tombstone::
1. legend: map 2. invective: epithet 3. obituary: death
15. mendicant: beggar::
1. benefactor: heiress 2. barrister: lawyer 3. menagerie: animals
16. interloper: intrusion::
1. epicurean: gourmet 2. charlatan: fraud 3. bard: poet
17. arrow: quiver::
1. shears: scissors 2. sword: scabbard 3. awl: perforation
18. igneous: rocks::
1. cumulus: clouds 2. soil: ground 3. perennial: plants
19. acoustics: sound::
1. linguistics: language 2. mysticism: spirits 3. statistics: stars
20. terpsichorean: graceful::
1. physician: stethoscope 2. geriatrician: old 3. accountant: accurate

4. b) (2)(d) *RELATES SETS OF IDEAS
ON SPECIFIED POINTS*

4. INTERPRETATION
Classification
K-3

CLASSIFYING ACTIVITIES (Primary)

1. Put doll furniture into the correct rooms in the doll house.
2. Put materials back in their proper place after use in the classroom.

4. b) (2)(d) *RELATES SETS OF IDEAS
ON SPECIFIED POINTS*

4. **INTERPRETATION**
Classification
K-3

3. Children can classify many kinds of words in preparing for more advanced experiences in outlining. Capitalize on the flowers they bring in. Classify words regarding the feel of the flower, the look of the flower, the smell of the flower.
4. Take roll call by using different topics. When the child's name is called he must respond with a word in the predetermined category. Some categories might be: names of cars, names of songs, names of games, words correlated with units, etc.

4. b) (2)(c) *IDENTIFIES DEGREE OF
SIMILARITY OR DIFFER-
ENCE BETWEEN IDEAS*
4. b) (2)(d) *RELATES SETS OF IDEAS
ON SPECIFIED POINTS*

4. **INTERPRETATION**
Comparisons
K-6

Source: *492 Ways to Use a Newspaper in the Elementary Classroom*²⁶

- Discuss items written about the same subject in different newspapers. Compare:
 - accuracy
 - clarity
 - detail
 - opinion — biased or unbiased
- Study a feature story. Compare its composition with that of a story in your reader. Try to match
 - beginning
 - steps leading to the climax
 - climax
 - conclusion
- Compare a feature article and a news article. Note the importance of human emotional appeal in the feature article. A feature article might
 - arouse curiosity
 - provoke humor
 - cause pity
 - stir imagination

4. b) (2)(c) *IDENTIFIES DEGREE OF SIMILARITY OR DIFFERENCE BETWEEN IDEAS*
4. b) (2)(d) *RELATES SETS OF IDEAS ON SPECIFIED POINTS*

4. **INTERPRETATION**
Comparisons
K-6

- Study leads of news articles. Note the various ways of writing leads, such as:

Quotation — "The best yet," commented a member of the audience as he viewed *Midsommer Night's Dream* at Sylvan Theatre last night.

Picture — Thunder, lightning, dashing rain, and twisting wind hampered the work of rescue workers at Churchill Downs.

Question — Was it worth it? Two teen-age boys, _____, flirted with death last night in a race with police officers on Highway 70-S.

Background — Here Daniel Boone broke a wilderness trail. Over the same trail this weekend followed one hundred Boy Scouts.

Astonisher — A frog in your soup! Today Billy Johns of this city found just that.

- Read two feature stories. Compare the two styles of writing. Give reasons for your choice of the feature article.
- Contrast the news story with the editorial as to purpose, vocabulary, construction.
- Find a story in your basal reader. Relate it to a picture or news article from the newspaper. Present both to the class and explain in what ways they are related.
- Read news articles on the same topic from different papers. Compare them.
- Compare a weekly news publication in your classroom with the daily newspaper. Look for such items as:

type of print
use of pictures
use of color

use of advertising
use of headlines
classification of news

- Consider the types of news writing:

news articles
editorials
feature articles

advertisements
sports articles
entertainment features

- Compare several newspapers, including a foreign one, as to

scope and quality of news
place of editorials

use of syndicated news
special sections

4. b) (2)(c) IDENTIFIES DEGREE OF SIMILARITY OR DIFFERENCE BETWEEN IDEAS
4. b) (2)(d) RELATES SETS OF IDEAS ON SPECIFIED POINTS

4. INTERPRETATION
Comparisons
K-6

- Compare editorials in your local paper with those in a paper from another city or those in a foreign paper.
- Parallel happenings in history with today's situations.

Historical Situation

Today's Situation

Colonial antipathy to George III
Articles of Confederation
United States Constitution
Frontier gold discovery
Opening of toll roads
Development of steam boat

Attitude toward teacher
United Nations
Club charter
Uranium and oil findings
Turnpikes
A new space craft

- Assemble pictures or news items which depict some recent development in science. Make experience charts. Compare with previously acquired information.

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparison
3-6

Social Studies

Source: *Elementary Social Studies Curriculum: Illustrative Units K-3, 4-6*

Grade 3 - "Living in Hot-Wet Regions: A Tropical African Village"

(p. 122) Make a chart to show the average amount of rainfall in the Congo Basin. Compare with the average for Maryland and for any other region already studied. Make a similar chart showing average temperatures.

(p. 124) Discuss how our community is governed and compare it with the government in a native village.

4. b) (2) *COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION*

4. **INTERPRETATION**
Comparison
3-6

Grade 4 — "Across the Ocean to the New Lands"

(p. 6) View the films on Columbus and the Vikings to gain additional information and to compare changes with respect to sailing vessels and techniques, knowledge of the world, and motivating forces.

(p. 7) Write a brief paragraph showing the "chain-reaction" effect of one discovery leading to other explorations.

Grade 5 — "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

(p. 91) Recall information from previous study to begin a chart or series of charts to show comparisons and contrasts between Hawaii and Alaska. As new phases of the study progress, information and illustrations should be added.

(p. 95) Compare Hawaii's climate with that of Alaska and give supporting evidence for differences.

Compare population information for Hawaii with that gathered about Alaska. Are there similar patterns of distributions? Are some of the same factors (e.g., natural features of the environment) influencing population density and distribution in Hawaii also operating in Alaska?

(p. 93) Make a chart to compare air and steamship travel to Hawaii in terms of distance, time, cost, and item being shipped.

(p. 94) Begin to keep a class record of some type (chart, notebook, file, etc.) covering the various aspects of Alaska studied (climate, resources). Information may be added as the study progresses and later used as review or for comparisons with Hawaii. Add information about mining to this class record.

(p. 96) Compare the life of an Eskimo family with that of a Montgomery County family. Include food, shelter, recreation. This may be done pictorially, in a story, or in a poem.

Draw a mural depicting Eskimo and Indian life in Alaska then and now. Show evidence of decreasing ancestral customs and crafts and the influence of outside groups as reflected in housing, clothing, etc.

Discuss the contrast between Eskimo and Indian life as depicted in the exhibits at the Smithsonian with what has been learned about Eskimo and Indian life today.

Grade 6 — "Feudalism Preserves Western Culture"

(p. 133) Compare the amusements of noblemen and serfs.

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparison
3-6

Show the relationship between a serf and his lord. Show the training of the daughters of the nobles compared to the training of the daughters of the serfs.

Contrast and compare the methods used by medieval groups with those of our county government today in providing services and protection.

(p. 134) Determine what the duties and responsibilities of the present pope are and make simple comparison with those of feudal popes.

(p. 136) Consult vegetation, rainfall, temperature, and relief maps. Compare information from these various sources and assess their significance.

(p. 138) Make tape recording of a discussion of differences between Roman and feudal periods. Include contributions of the feudal period to our present culture.

4. INTERPRETATION
Comparison
7-12

For teachers who make use of questions asking students to make written comparisons of material, Sanders' *Classroom Questions, What Kinds?*, has some useful suggestions.²⁷ Pointing out that the intellectual process of comparison is more complicated than would appear on the surface, he observes that, for example, two sets of ideas, such as two magazine articles, may agree generally but differ on specific points; and one may deal with ideas lacking in the other. Sanders suggested the following steps for the student to follow in making a comparison:

- A. Master the ideas to be compared, through study and note-taking. Determine common topics and ways in which specific points are related.
- B. Organize the presentation of the comparison. Three possible ways are suggested.
 1. Introduce the subject of the articles. Identify a topic common to both articles and compare their positions. Identify another common topic and again compare the position of the two articles. Identify and compare all other topics discussed in both articles. Summarize the comparison.
 2. Introduce the subject discussed. Discuss points of similarity in the articles. Discuss points of difference or contradiction. Summarize the comparison.

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparison
7-12

3. Introduce the subject of the articles. Summarize one article. Summarize the other article. Point out specific ways in which the two articles are related. Summarize the comparison. Sanders emphasizes the importance of the last two steps, stating that summarizing the two sets of ideas is not enough. The student must perform the *whole* process and explicitly point out the comparisons, even when they seem obvious.

One difficulty of comparison questions based on textbook reading, as Sanders points out, is that significant comparisons often are made in the textbook. Then asking students for the comparison is merely calling for the use of memory, rather than for interpretation. Sanders suggests asking comparison questions which call for the student to relate sets of ideas studied in previous units. This is especially appropriate toward the end of the year, when students may have gained a broad overall view of a subject. A history question might ask the student, using one or several textbooks, to relate a past situation to contemporary problems about which the teacher believes the student to be sufficiently well-informed to make meaningful comparisons. Ample time should be allowed for thinking and expressing thoughts in writing.

Particularly useful for making comparisons of ideas are newspaper articles (other than straight news stories) such as feature articles, interviews, sports stories, letters to the editor, book reviews, editorials, editorial cartoons, and signed newspaper columns (including film, TV, art, and music reviews). For example, two film critics' reviews of the same movie from two different daily papers could be compared and contrasted, using some of the suggestions given by Sanders. Or a feature story on an event might be compared with a straight news story of the same event for differences in style of writing and points emphasized by each writer. Also suitable for developing the skill of making comparisons are various aspects of works of literature, such as theme, form, genre, settings, characters, and plot.

4. INTERPRETATION
Comparison
9

The following specific suggestions for making comparisons based on reading plus film viewing are to be found in the MCPS *Course of Study in United States History and Government I, Grade 9*.²⁸ These activities might be introduced with a study of Sanders' specific suggestions for making comparisons which have been summarized above.

p. 22: Reports on the English colonies can be subdivided by geographic areas — New England, Middle Colonies, Southern Colonies. Compare reasons for various English settlements. Then compare them with French, Spanish, and Dutch settlements.

For summary, compare the textbook author's interpretation of these events with student reports and individual research.

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparison
9

- p. 24: In what ways was colonial education like ours today? In what respects was it different?
- p. 25: Compare Colonial dissent with dissent today.
- p. 30: How did the Royal, Charter, and Proprietary governments compare?
- p. 36: Have the students report on the Colonial policies of France and Spain. Then have students compare the policies of France and Spain with the policy of England.
- p. 39: Review with the class the advantages which England had in her rivalry with other European powers. Compare with those that determine world power today.
- p. 109: Have a student compare the Declaration of Independence with the French Declaration of the Rights of Man and of the Citizen. (Excerpt from the latter document is given on page 109).
- p. 110: Contrast town government in New England having officials such as a constable, assessor, tithing man, fence viewer, hog reeve (who put rings in hogs' noses), field driver (who impounded stray cattle), etc., with county government in South having officials like justice of the peace (who recommended appointments to governor); with town and county governments in Middle Colonies, having officials in cities (aldermen, selectmen, mayor).
- Contrast the post-Revolutionary pattern of state government with the Colonial pattern, including selection and powers of the governor, the structure and term of the legislature, and selection of judges.
- p. 111: Compare the pattern of state government of Maryland in her early statehood with that of today.
- p. 188: Divide the class into two groups. Have one group examine the Federalist point of view (defense of the Constitution); the other, the anti-Federalist point of view (criticism of the Constitution). Then have the two groups present the points of view in the arguments for and against ratification of the Constitution.
- p. 191: Have a committee report on some historians' interpretations of the Constitution. Give the class a brief summary of some of the major differences that have arisen among historians over the interpretation of the Constitution and its adoption.
- p. 246: Has the Cabinet served the same purpose for all Presidents? Explain.
- p. 84: Arrange a panel discussion between two students: one who has read *Oliver Wiswell* and the other who has read *The Tree of Liberty*. Have them compare points of view.
- p. 88: Have the students compare these differing views on the economic causes of the war:

Chapter 4 — Gipson
Chapter 5 — Knollenberg

4. b) (2) COMPARES IDEAS FOR SIMILARITY, IDENTITY, DIFFERENCE, CONTRADICTION

4. INTERPRETATION
Comparison
9

p. 89: Compare these differing views on the Revolution as a problem of world empire:

Chapter 6 -- Rossiter

Chapter 7 -- Jenson

Have the students read Rozwenc and Schultz. Part Four -- Some explanations of the American Revolution by twentieth century historians and social scientists. Compare these interpretations.

p. 90: Compare to colonial situations today.

p. 93: Develop the idea that documents like the Communist Manifesto and the Declaration of Independence are important because they determine the nature of the two major political systems of our world today. Contrast the Declaration with the following passage from the Manifesto (shown on an overhead projector) (Passage from Communist Manifesto follows on page 93.)

p. 101: Compare the way the ancient Greeks accepted devotion to the state with that of today.

p. 101: Have the students draw a balance sheet on which they list the advantages of the British on one side and the advantages of the Americans on the other side. Then discuss the questions:

a) Which side seemed to have more advantages?

b) Why do you think the Americans won?

p. 259: Have the class complete the following chart concerning the accomplishments of the Federalist Party as contrasted with the failures of the government of the Articles of Confederation. (Chart follows on page 260.)

p. 265: Students who read biographies of the same person may hold a panel discussion in which they compare the treatment of the subject by different authors, or they may compare their reactions to the person studied.

p. 287: Have the class or a small group compare and contrast the rise of American nationalism with the development of this feeling in the emerging nations of the world today. Use current sources.

p. 294: Compare the economy of the nation at this time (1815-1848) with that of Colonial America.

p. 300: Compare and contrast the roles of Jackson, Calhoun, Clay, Webster, etc., in the Nullification controversy...

4. b) (2)(c) *IDENTIFIES DEGREE OF SIMILARITY OR DIFFERENCE BETWEEN IDEAS*
4. b) (2)(d) *RELATES SETS OF IDEAS ON SPECIFIED POINTS*

4. **INTERPRETATION**
Comparisons
K-6

Some of the following topics might lend themselves to discussions of comparison of ideas.

The teacher might begin just by having students discuss likenesses and differences in a general way. Then ask them on which points they think the two things might be compared. Set up the points of comparison first, then compare the two things.

1. Compare two animals in a story read by the teacher (such as Father Bear and Baby Bear in "The Three Bears"; or two animals in "The Three Little Pigs").
2. Compare two people in a story read by the teacher (such as Snow White and Sleepy in "Snow White and the Seven Dwarfs").
3. Compare two characters from different stories read by the teacher (such as Cinderella and Snow White).
4. Compare two stories which have been read by the teacher.
5. Compare two songs which children sing.
6. Compare two pictures.
7. Compare two paintings by famous artists.
8. Compare two wild animals.
9. Compare two leaves.
10. Compare two plants.
11. Compare two holidays.
12. Compare two seasons.
13. Compare a butterfly and a bird.
14. Compare mother's work and father's work.
15. Compare two tools used in the class.
16. Compare the teacher and the principal.
17. Compare a bird and an airplane.
18. Compare information given in two filmstrips, films, tapes, or 8 mm filmloops.

4. b) (2)(d) **RELATES SETS OF IDEAS
ON SPECIFIED POINTS**

4. **INTERPRETATION**

Classification
K-6

The teacher introduces the use of five senses in connection with familiar situations.

For example: Circus (as experienced through the five senses)

What You See	Hear	Smell	Feel	Taste
tent	roaring	animals	excitement	popcorn
animals	shouting	tanbark	happy	hot dogs
band	music	sweat	scared	soft drink
		peanuts		

Words that are found in the readers or other textbooks may be used in questions as suggested below.

WHAT WOULD YOU FIND?

Check the right answers:

- | | | | |
|----------------------------------|-------------|-----------|-----------|
| 1. What can you see on a street? | a truck | a table | a car |
| 2. What is good to eat? | a ball | a cookie | a pear |
| 3. What has long ears? | a calf | a rabbit | a dog |
| 4. Where can you find a tulip? | in a garden | in school | in a ball |

Make word recognition games with sets of alike words, the same family, words beginning with the same letter, words with endings alike, etc.

Make science games by mounting pictures of products from the same raw material, or various kinds of flowers, animals, light, heat; etc.

Make music games by sketching and mounting pictures of same key signatures, meters, patterns.

Make games matching music notes, signatures, themes, and so one, which are alike.

Make games which match related objects such as knife-fork, table-chair, cup-saucer. Use words or pictures or both.

4. b) (3)(a) **DRAWS AN INFERENCE
FROM EVIDENCE PRE-
SENTED IN PICTORIAL
FORM**

4. **INTERPRETATION**
Inference/Pictures
K-5

The interpretation of pictures goes beyond the literal level of merely telling what is in the picture. Inferential thinking can be encouraged through beginning with discussions about varied everyday, common experiences and discussions about interesting pictures. Help students understand the kind of thinking involved in making and justifying inferences.

Inference means:

- *reading between the lines*
- *thinking beyond the visual or stated facts*
- *providing reasonable justification*

1. Select a picture and ask:

"What feeling do you think the boy's expression indicates? What has caused the boy to feel this way?"

(The picture shows an action or emotion which has resulted from one easily identified cause; for example, a picture which shows a boy looking chagrined because his escaped pet frog is about to be discovered by his father in some unlikely place.)

2. Select a picture and ask:

"What season of the year is represented in this picture? What evidence in the picture supports your ideas?"

(The picture might clearly show apple trees in bloom, kites flying, children playing at the beach, leaves turning red and gold, children skating on a frozen pond, or some other typically seasonal activity.)

3. Select pictures appropriate to these questions:

- a) What type of climate is shown in the picture? How do you know?
- b) What geographic region or place can be identified? (Slides may be useful.) What are the visual clues which justify your inference?
- c) What time period is shown?

Is it modern?
Old-fashioned?
Long ago?
Ancient?

4. b) (3)(a) *DRAWS AN INFERENCE FROM EVIDENCE PRESENTED IN PICTORIAL FORM*

Prehistoric?
How do you know?

d) What do you think this is used for?

How do you think it works?

4. **INTERPRETATION**
Inference/Pictures
K-6

4. b) (3)(a) *DRAWS AN INFERENCE, IMPLICATION, CONCLUSION, OR GENERALIZATION FROM EVIDENCE IN PICTORIAL FORM*

4. **INTERPRETATION**
Inference
5-8

POLITICAL CARTOONS

1



2



3



1. Who is the man in the top hat in the cartoon?
2. What might the other two men represent?
3. What alternative might the man in the top hat have in this sequence?
4. Do you think the man in the top hat is right in intervening in situations such as this one?

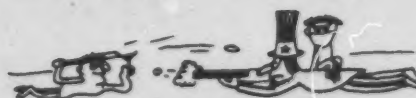
6



5



4



4. b) (3)(b) *DRAWS AN INFERENCE
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM*

4. **INTERPRETATION**
Inference
K-6

As students learn to make inferences from pictures, they can be helped to do the same kind of thinking in listening to stories read by the teacher and in their own reading, using their library books, readers, or social studies books. For example, ask them to listen carefully to a story; and when it is finished, tell the rest of the class what kind of a person _____ is. Other possible questions might be:

What time of year did this story take place?
Did this happen in recent times or olden times?
Where did the story take place?
Do these people live the way we do or differently?

If these are intended to be Interpretation questions, be sure that the answer is not specifically stated in the text and that children must actually infer it from clues given. If they are able to handle such questions, ask them to justify their statements with a question such as "How do you know?" or "What reason can you give for thinking this?" or "What makes you think so?"

As the students become more expert in this kind of thinking, the teacher may put more emphasis on their being prepared to back up their statements with evidence.

4. **INTERPRETATION**
Inference/Verbal
K-3

RIDDLES

One way to help primary children develop inferential thinking is by giving them riddles which describe something easily identified from clues given. Example:

I have long ears and a short fluffy tail.
I hop.
I eat carrots.
What am I? _____

Spaces may be provided above the riddles in which the children may illustrate their answers. The following are appropriate for Halloween. It will be noted that the activity in this form combines both Interpretation (drawing an inference) and Translation (from verbal to pictorial form).

I am orange. I have a face. I make good pie. I am a _____.	I ride in the sky on a broomstick. I have a tall hat. I am a _____.	I am black. I have four feet and a tail. I say, "Mew." I am a _____.	I am white. I say, "Boo!" I scare people. I am a _____.
---	--	--	--

4. b) (3)(b) *DRAWS AN INFERENCE
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM*

4. **INTERPRETATION**
Inference/Verbal
K-6

The following kind of exercise may be used, first in oral, then in written, form:

1. Mary and Alice liked to play.
They had ten cents.
They saw a cake, a ball, and a book in a store.
What did they buy?
 - a) They bought a ball.
 - b) They bought a cake.
 - c) They bought a book.
2. The children were ready for a picnic.
Dark clouds came into the sky.
The wind began to blow.
The rain began to fall.
What did the children do?
 - a) They went to the picnic.
 - b) They stayed home.
 - c) They played in the garden.
3. The children rolled snow into balls.
They rolled two large balls.
They put one on top of the other.
Then they rolled a smaller ball.
They put the smaller ball on top of the large balls.
What did they make?
 - a) They made a snow house.
 - b) They made a snow man.
 - c) They made a snow bed.
4. Some boys and girls visited a farm in the country.
The farmer showed them the pigs.
He let them feed the cows.
He gave them some milk to drink.
What did they do?
 - a) They walked home.
 - b) They threw stones.
 - c) They thanked the farmer.

4. b) (3)(b) *DRAWS AN INFERENCE
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM*

4. *INTERPRETATION*
Inference/Verbal
K-6

5. Little White Rabbit was not happy. He always wanted something someone else had. One day he saw a duck. He said to himself, "I wish I had feet like the duck." On another day he saw a squirrel. He said to himself, "I wish I had a tail like a squirrel." When a bird came by he looked and looked. What do you think he said?
- a) I wish I had ears like the bird.
 - b) I wish I had wings like the bird.
 - c) I wish I could eat that bird.
6. Long ago, before there were automobiles, John had a brown horse named Nell. Nell was a good swift horse who took John wherever he wished to go. John was a brave boy and was not afraid to ride many miles in order to do something for his mother or his father. One night John's mother was sick and John knew what he must do. What do you think he did?
- a) He said he was afraid to ride alone.
 - b) He cried and cried.
 - c) He rode on his horse to the doctor's house.
7. Long ago there were no newspapers, nor radio, nor TV. This is how they learned about the news. A man came around the streets with a paper in his hand. He rang a bell, and people came around him. What do you think he did then?
- a) He gave newspapers to the people.
 - b) He danced and sang.
 - c) He read the news to the people.
8. Bob was very sad. He had been sick and could not go on a picnic with the other children. Even though he was well now, his mother thought he should not go on a picnic. Just when he was feeling lonely, he looked up and saw Uncle Tom. "Come with me," said Uncle Tom. "I think I know what a boy would like. I just saw a big tent with elephants, dancing horses, clowns, and people in costumes going in." Bob was very glad to go with Uncle Tom. Where do you think they went?
- a) To a zoo
 - b) To the circus
 - c) On a picnic

4. b) (3)(b) **DRAWN AN INFERENCE
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM**

4. **INTERPRETATION**
Inferences and conclusions
3-6

Literature may be used as one vehicle in the development of the skill of discovering the relationships between ideas.

Ask the students to relate the literary setting of a work of fiction to its characters — their traits, motivation, and actions.

Ask the students to relate the theme, plot, or action to events in their own experience. Also, the characters in books may be related to the students themselves, to members of their families, or to other people they know.

- Ask the students to recognize character traits not stated but revealed in action. Compare and contrast the character traits, motives, and reactions of different characters in the same book or in different books.

Source: *MCPS English Language Arts Course of Study (Elementary Level)*²⁹

Grade 3: *Hi Tom* page III-3

- Did either of the characters change during the story?
- How does the author keep you waiting to find out what is going to happen?
- How is Tom's life like yours? How is it different?
- Is the hermit like anyone we would know?

Grade 4: *Many Moons* page IV-16

- The Princess Lenore could have chosen anything in the world for her very own. Why do you suppose she chose the moon?
- The Princess said that things never really disappear: A new moon always takes the place of the old, a new tooth replaces an old, new flowers replace those removed from a garden. Think of some things which to you never really disappear. Is the Princess's idea completely true?

Grade 5: *How Many Miles to Babylon* page V-23

- Did the children discover that all of us, no matter how differently we live, have similar emotions?
- Did the children realize some of the responsibilities implied by their own advantages in today's world?

Grade 6: *Follow My Leader* page VI-28

- Why do you think Mr. Weeks treated Jimmy so firmly?
- When Jimmy waited for his dog, he breathed rapidly and his hand holding the meat trembled. Why?

4. b) (3)(b) **DRAWS AN INFERENCE,
IMPLICATION, CONCLU-
SION, OR GENERALIZA-
TION FROM EVIDENCE
PRESENTED IN VERBAL
FORM**

4. **INTERPRETATION**
Inference
3-6

UNDERSTANDING CHARACTERS IN LITERATURE. Students should be encouraged to "see and feel" what they are reading. The recreation of characters is one way of giving opportunity for identification and emotional understanding. For example, present a few paragraphs such as the following example taken from *Reading Aids*, Russell and Karp:³⁰

He was an ugly old man, wrinkled and gray. He was poor and badly dressed. His coat was worn and shabby, his trousers patched and threadbare. But his lively dark eyes lighted up his worn old face and gave it a soft, warm glow. For all his poverty, he seemed happy and contented.

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

4. **INTERPRETATION**
Implication
4-6

MAKE UP AN AD. Ask each student to bring several full page ads from old newspapers or magazines and compose a new ad out of words and pictures cut from those he/she has brought. After each student reads a few lines of the new ad, omitting the name of the article or product, other students guess what he/she is selling. With younger children, you might prefer to provide the ads in order to choose a suitable vocabulary and type size.

4. **INTERPRETATION**
Inference
4-9

An inference is

- thinking beyond the given facts
- coming up with ideas based upon the given
- seeing more in the materials than is inherently obvious

An inference should be justifiable, based on the given.

4. b) (3)(b) *DRAWS AN INFERENCE
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM*

4. *INTERPRETATION*
Inference
4-9

*Crazy Horse*³¹

Crazy Horse is an historical story appropriate for developing the skill of drawing inferences. It is written in nine chapters, with inferential questions at the end of each chapter.

Chapter I

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

1. Was it a calm or windy day? _____
2. Were these the Rocky Mountains? _____
How do you know? _____
3. Draw a line around the word that best fits the three men:
a) officers b) chiefs c) soldiers
4. Draw a line around the sentence that best describes the way the troops moved:
a) in large well-spaced groups
b) in a file, two or three abreast
c) no order
5. Was this wet or dry country? _____
How do you know? _____

4. b) (3)(b) *DRAWS AN INFERENCE
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM*

4. INTERPRETATION
Inference
4-9

6. What was the name of the group of soldiers:
a) regiment b) battalion c) division
7. How many men were there in the groups?
a) 13,000 b) 1,300 c) 30,000
8. How many men in a regiment? _____
9. Are these troops reinforcements? _____
10. Where were the Indian Warriors? _____
11. How many Indians were ready for battle?
a) 1,300 b) 13,000 c) 3,000
12. Which two men wanted to attack now?
a) Bear Claw b) Crazy Horse c) Sitting Bull
13. Which man was the boss?
a) Bear Claw b) Crazy Horse c) Sitting Bull
14. Were the men on the ridge from the same tribe? _____
How do you know? _____

4. b) (3)(b) *DRAWS A CONCLUSION
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM*

4. **INTERPRETATION**
Conclusion
7-12

WHO IS THE ENGINEER?

The crew on a certain train consists of three men — the brakeman, the fireman, and the engineer. Their names in alphabetical order are Jackson, Roberts, and Smith. By coincidence, there are three passengers on the train with corresponding names: Mr. Jackson, Mr. Roberts, and Mr. Smith.

The following facts are known:

1. Mr. Roberts lives in Toledo.
2. The brakeman lives halfway between Toledo and Indianapolis.
3. Mr. Jackson earns exactly \$20,000 a year.
4. Smith once beat the fireman at billiards.
5. One of the three passengers mentioned, who lives in the same city as the brakeman, earns exactly three times as much as the brakeman.
6. The passenger living in Indianapolis has the same name as the brakeman.

What is the engineer's name?

4. b) (3)(b) **DRAWS A CONCLUSION
FROM EVIDENCE PRE-
SENTED IN VERBAL FORM**

4. **INTERPRETATION**
Conclusion
7-12

INTERPRETING

"Strange as it may seem, it is too hot on the sun for anything to burn as we know burning. Wood, coal, or oil cannot exist on the sun. These substances would be broken into their separate atoms and elements, and there would be nothing to burn. The secret to the sun's energy lies in the hydrogen and helium atoms that make up most of the sun's matter."

On the basis of the data in the paragraph only, decide if the statements below are true or false. If there is insufficient evidence to draw such a conclusion, mark the statement (?). Write your answers on a separate piece of paper.

1. The heat of the sun is caused by fusion of hydrogen nuclei.
2. The sun is very hot.
3. The heat of the sun is caused by substances being broken into their separate elements.
4. Coal would burn up on the sun.
5. Most of the sun's matter is made up of hydrogen and helium.
6. Most of the sun's energy is produced in the center.

SCIENCE

21

Analysis

INTERPRETING

SCIENCE

21

Analysis

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Compare your work with the sample below. You may wish to defend your interpretation with appropriate evidence if your answer is different from the sample.

1. The heat of the sun is caused by fusion of hydrogen nuclei. (?) (The paragraph says the secret lies in the hydrogen and helium atoms, but it does not state how.)
2. The sun is very hot. (T)
3. The heat of the sun is caused by substances being broken into their separate elements. (F) (The paragraph states that the heat would cause substances to be broken into elements, not that the breaking up of the substances would cause the heat.)
4. Coal would burn up on the sun. (F) (The paragraph says coal would be broken down into its elements and then there would be nothing to burn.)
5. Most of the sun's matter is made up of hydrogen and helium. (T)
6. Most of the sun's energy is produced in the center. (?) (No information is given about this in the paragraph.)

Source: *Thinking Box*³²

4. b) (3)(c) **DRAWS AN INFERENCE,
IMPLICATION, CONCLU-
SION, OR GENERALIZA-
TION FROM DATA PRE-
SENTED IN STATISTICAL
OR DIAGRAMMATIC FORM**

4. **INTERPRETATION**
Inference
5-6

Source: *MCPS Social Studies Course of Study: Illustrative Units (4-6)*

Grade 5 – “Tropical Hawaii and Frontier Alaska: Lands of Contrast”

(p. 96) Use a physical map to help students identify potential sources of water power.

Grade 6 – “Feudalism Preserves Western Culture”

(p. 136) How would Crusaders have learned the information from a map study when they needed to know physical features of route traveled, scale of miles, vegetation, rainfall and temperature along their route?

4. **INTERPRETATION**
Inference
7-12

MEXICO'S LEADING EXPORT CROPS

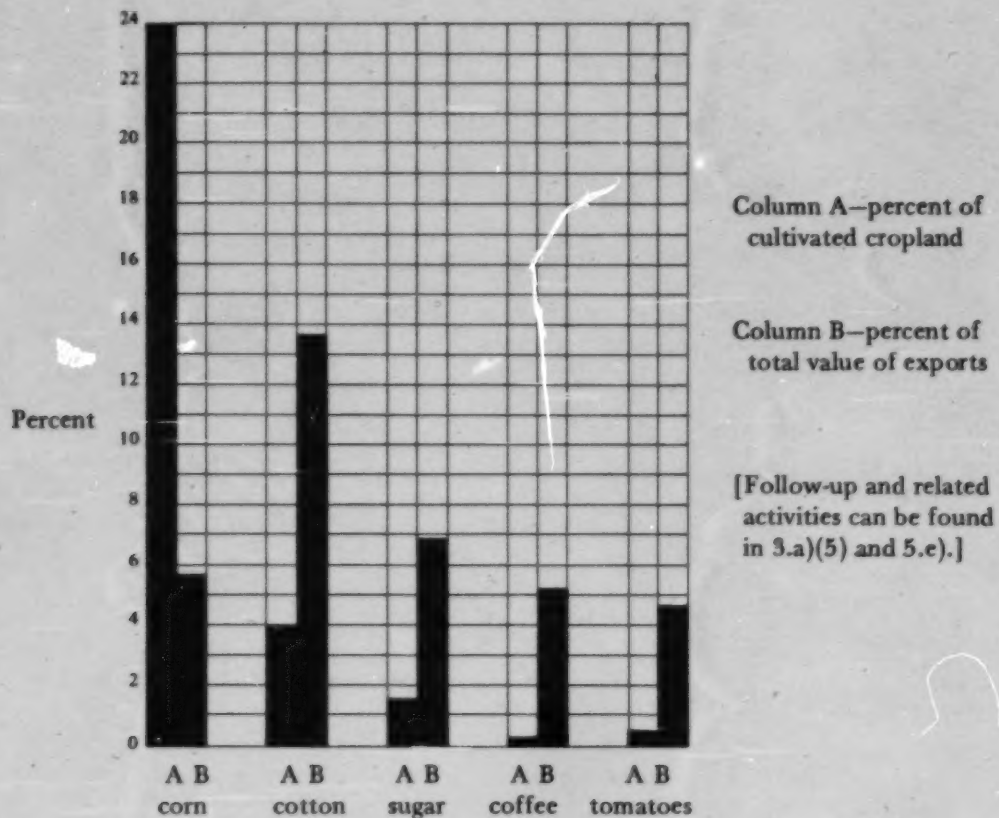
Use the graph on page 326 to answer the following questions about Mexico's leading export crops of 1968.

1. What reasons could there be for corn to have a higher percent of cropland than value of exports, while the four other crops are the opposite?
2. What factors would make it abnormal for the percents to be the same (or nearly the same) for both cropland and value of exports?
3. Tomatoes have a greater percent of cultivated cropland than coffee, yet coffee has a greater percent of total value. What reasons could there be for this?
4. Which of the crops might be most used by the Mexicans? What relationships between statistics on the graph tells this?
5. Which crop might have the greatest “dollar yield” per acre?
6. How might weather influence the statistics shown on the chart?

4. b) (3)(c) *DRAWS AN INFERENCE
FROM STATISTICS*

4. **INTERPRETATION**
Inference
7-12

MEXICO'S LEADING EXPORT CROPS



4. b) (4) *LOCATES EVIDENCE THAT
SUPPORTS A GIVEN GENERALIZATION*

4. **INTERPRETATION**
Inference
7-12

Source: MCPS Social Studies Course of Study: Illustrative Units

Grade 5 — "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

(p. 93) List several items being shipped from Hawaii to San Francisco. Ask the students to select the most advantageous type of transportation and support their choice.

4. b) (4) *LOCATES EVIDENCE THAT
SUPPORTS A GIVEN GENERALIZATION*

4. *INTERPRETATION*
Inference
7-12

The object is not to prove or disprove the generalization, but rather to recognize evidence that relates to its truth or falsity. The question could take this form: "From your textbook, give evidence that supports or refutes this (specific) generalization."

Such questions would be appropriate at the end of a social studies unit or at the end of the year, when several units have been completed and students have an overall view of the subject matter that they have been studying over a period of time.

4. b) (5) *LOCATES OR SUPPLIES EX-
AMPLES OF A GIVEN VALUE*

4. *INTERPRETATION*
Values
K-6

Initiate this kind of activity in reading a story to children, by making a statement such as one of these below:

"Something happens in this story that makes me feel that

- _____ is really a very kind person."
- _____ is sorry for what he has done."
- _____ loves animals."
- _____ is selfish and dishonest."

Then ask the students to listen carefully and see whether they can identify the parts of the story which support this opinion of values.

Do not require, however, that the student's answer be identical to the teacher's opinion, if the student can justify his/her answer, and it is a reasonable answer. Original thinking should be encouraged.

It should be emphasized here that the student is not expected to make a judgment but rather to identify the value upon which an action, assertion, or judgment is based.

For upper elementary students, a question might take a form such as the following:

Some people believe that . . . or

The statement is sometimes made that ". . ."

Which of the following sentences is the best interpretation of this statement?

What action of _____ in the story suggests that he might believe this statement? (or not believe this statement?)

What opinion of the author on page _____ suggests that she might consider this statement to be true?

4. b) (6) *RELATES CAUSE AND EFFECT*
4. b) (6)(b) *GIVEN AN EFFECT, SUPPLIES A POSSIBLE CAUSE*
4. b) (6)(c) *GIVEN AN EFFECT, RECOGNIZES SINGLE AND MULTIPLE CAUSES*

4. INTERPRETATION
Cause and Effect
K-6

In discussion of stories, ask "why" questions to bring out cause-effect relationships — for example, why story characters thought, behaved, or reacted as they did.

Source: *MCPS Elementary English Language Arts Course of Study, Bulletin No. 185*

Kindergarten

The Biggest Bear, p. K-5

Why in the beginning of the story did Johnny want to shoot the bear?
Why did the bear have to be taken back to the woods?

Pete's Chair, p. K-9

Why did Peter carry his old chair to his room?
Why did Peter want to run away from home?
Why did Peter want to take his baby picture with him when he went outside the house?
Why did Peter's mother give him a special invitation to come inside?
Why did Peter hide from his mother?
Why do you think Peter decided to help Father paint his old chair?

Grade 1

The Camel Who Took a Walk, p. I-13

Why does night in the forest seem particularly dark?
Why did the monkey plan to drop the coconut on the tiger's head?
Why did the squirrel and the bird plan as they did?

Crow Boy, p. I-17

Why do you think Chibi played by himself instead of playing with the other children?
Why do you think Chibi came to school every day in spite of his sadness?
When and how did Chibi's feelings about school change? Why?

4. b) (6) *RELATES CAUSE AND EFFECT*
4. b) (6)(b) *GIVEN AN EFFECT, SUPPLIES A POSSIBLE CAUSE*
4. b) (6)(c) *GIVEN AN EFFECT, RECOGNIZES SINGLE AND MULTIPLE CAUSES*

4. INTERPRETATION
Cause and Effect
K-6

The Story About Ping, p. I-21

Why do you think the boat had two wise eyes painted on it?
 Why did the Master allow the ducks to get off the boat?
 Why did Ping not come back?
 Why are the waters of the Yangtze River called yellow?
 Why did the fishing birds have rings around their necks?
 Why was there a barrel tied on the little boy's back? What do you use instead of a barrel?

Grade 2

Stone Soup, p. II-7

Why did the peasants say they had no food?
 Why do you think they feared strangers?
 Why do you think one soldier said that a bit of beef would make the soup good enough for a rich man's table?

The Blind Men and the Elephant, p. II-19

Why do you think they had the type of house that they did?
 Why would the men have to go to the palace of the Rajah to see an elephant?
 Why do you suppose the smallest one was always the leader?
 Why would you think the elephant was well trained?
 Why did the blind men argue about what the elephant was like?
 Why do you think one man broke his cane during the argument?

Grade 3

The Cricket in Times Square, p. III-5

Why was Mario taking care of the newsstand?
 Why was Chester surprised at Harry the Cat when he first appeared?
 Why do the Chinese like crickets?
 Why did Mario go to Sai Fong again?
 Why did Mama think Chester was a jinx?

4. b) (6) **RELATES CAUSE AND EFFECT**
4. b) (6)(b) **GIVEN AN EFFECT, SUPPLIES A POSSIBLE CAUSE**
4. b) (6)(c) **GIVEN AN EFFECT, RECOGNIZES SINGLE AND MULTIPLE CAUSES**

4. INTERPRETATION
Cause and Effect
K-6

Sam, Bangs & Moonshine, p. III-9

Why did Thomas always do what Sam told him to do?
Why did Thomas go to Blue Rock?
Why do you think Sam's father gave her a gerbil?
Why do you think Sam named the gerbil "Moonshine"?
Why did "Moonshine" become a problem in the story?

Grade 4

The Empty Schoolhouse, p. IV-25

Why did Lullah wish to attend the St. Joseph Parish School?
Why do you think social problems arose in French Grove?
Why did Lullah's parents not interfere with her decision?

Grade 5

Queenie Peavy, p. V-17

Why do you think Queenie so often said, "I don't care"?
Why do you think Queenie and Little Mother were good friends?
Why do you think Queenie acted so differently at home from the way she acted at school?

How Many Miles to Babylon, p. V-21

Why was the Atlantic Ocean such a surprise to James?
Why did James want to believe the story about the prince?
Why do you feel James found it necessary to follow the secret ritual in the deserted house?
Why did Gino, Blue, and Stick need James?
Why do you think James changes his views on the ring, the ritual, and the prince?

Grade 6

Island of the Blue Dolphins, p. VI-7

Why did Karana feel guilty about her father's death?
Was Ramo ready to assume the role as leader of the tribe? Why or why not?
Why did Karana destroy the village?
Why was she fearful about making the weapons?
Why did she return?

4. b) (6) *RELATES CAUSE AND EFFECT*
4. b) (6)(b) *GIVEN AN EFFECT, SUPPLIES A POSSIBLE CAUSE*
4. b) (6)(c) *GIVEN AN EFFECT, RECOGNIZES SINGLE AND MULTIPLE CAUSES*

4. **INTERPRETATION**
Cause and Effect
K-6

Why did she make her shelter before she made her cooking utensils?
Why did she use kelp instead of sea otter sinews?
Why was she determined to get points for her spears?
Why did she refer to the animal pets as her children?
Why didn't she leave with the first white party?

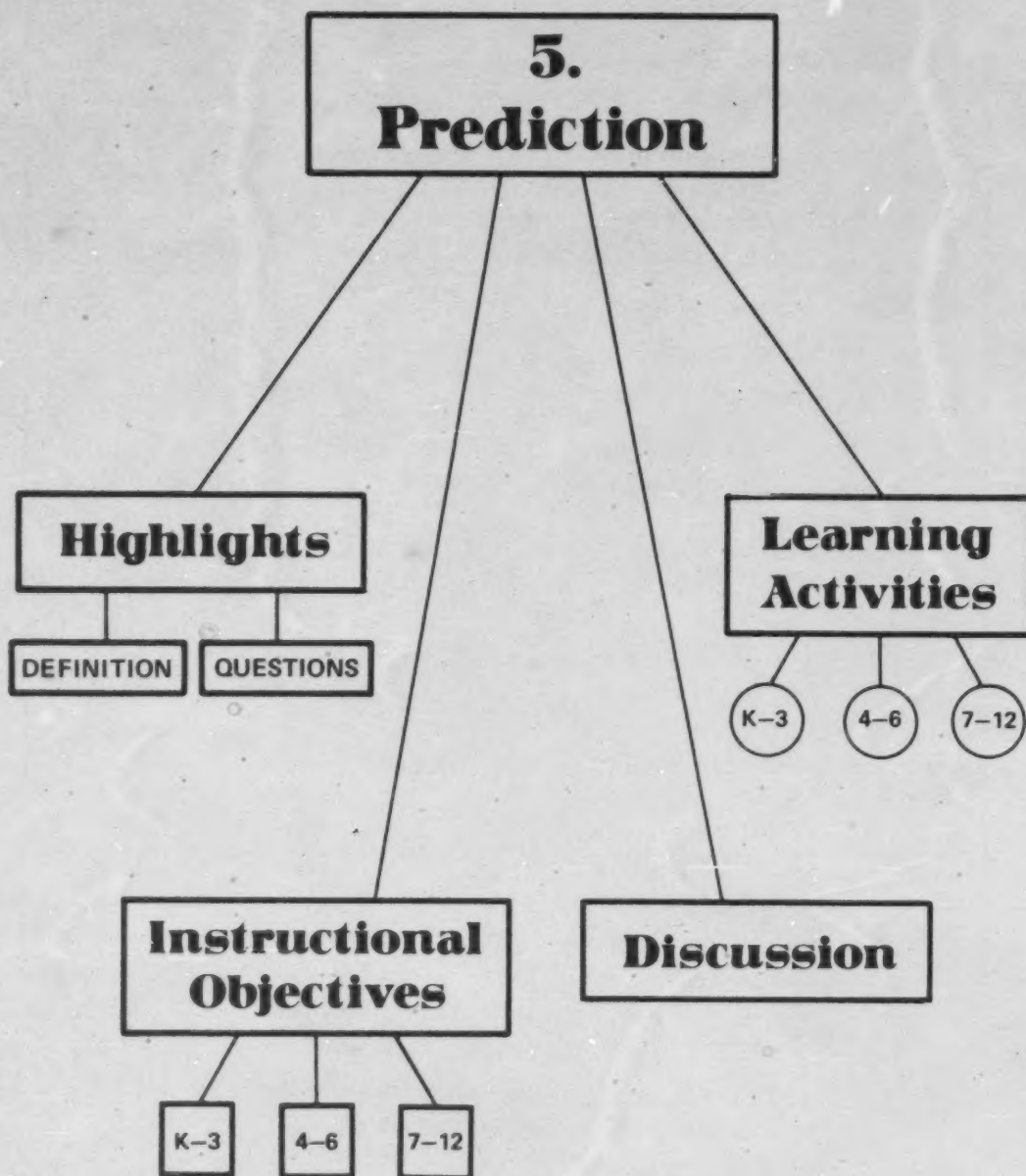
Mogo's Flute, p. VI-15

Why was Mogo so sickly?
Why was Mogo's flute important to him?
Why did Mogo run away?
Mogo had felt so far away from home when it was actually such a short distance. Why?

FOOTNOTES

1. Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper & Row, Inc., 1966), pp. 44-63.
2. *Ibid.*, p. 47.
3. *Ibid.*, p. 51.
4. From the book, *Developing a Successful Elementary School Media Center* by Lillian Glogau, Edmund Krause, and Miriam Wexler. © 1972 by Parker Publishing Co., Inc., West Nyack, New York and used with their permission, p. 103.
5. Reprinted by permission of the publisher from David H. Russell and Etta E. Karp, *Reading Aids Through the Grades* (New York: Teachers College Press, copyright 1938, 1951, by Teachers College, Columbia University), p. 110.
6. *Ibid.*, pp. 99-100.
7. MCPS, *492 Ways to Use a Newspaper in the Elementary Classroom*, Bulletin No. 242 (Rockville, Md.: Montgomery County Public Schools), 1970.
8. Benjamin Bloom, Thomas Hastings, and George F. Madaus, *Handbook on Formative and Summative Evaluation of Student Learning* (New York: McGraw-Hill Book Co., 1971), pp. 181-182.
9. Sanders, *Classroom Questions*, pp. 143-145.
10. PGC, *Vocabulary Handbook for Secondary Reading Teachers* (Upper Marlboro, Md.: Board of Education of Prince George's County, 1968), pp. 177-179.
11. Acknowledgment is made to Ginn and Company [Lexington, Mass.] and Sara W. Lundsteen. Ginn and Company Contributions in Reading, No. 24, *Procedures for Teaching Critical Reading and Listening*, by Sara W. Lundsteen, 1964.
12. Bloom, et al., *Handbook*, pp. 181-185.
13. MCPS, *492 Ways*.
14. *Ibid.*
15. George E. Delury (ed.), *The World Almanac and Book of Facts*, 1974 Edition (New York: Newspaper Enterprise Association, Inc., 1974), pp. 150-151.
16. Selma Wasserman, Jack Wasserman, and Louis E. Raths, *The Thinking Skills, Thinking Box* (Westchester, Ill.: Benefic Press, 1969).
17. *Ibid.*

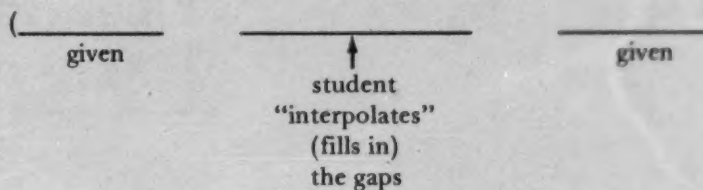
18. MCPS, --*And All This IS Reading*, Bulletin No. 203 (Rockville, Md.: Montgomery County Public Schools, 1967), p. 126.
19. Mary E. Platts, *Anchor* (Stevensville, Mich.: Educational Service, Inc., 1970), p. 87.
20. Wasserman, *Thinking Box*.
21. Sanders, *Classroom Questions*, p. 64.
22. D.C. Reading Center and Department of Elementary Supervision, *Reading Comprehension Skills* (Washington, D.C.: District of Columbia Public Schools, 1971).
23. PGC, *Vocabulary Handbook*, pp. 13-16.
24. *Ibid.*, pp. 17-19.
25. *Ibid.*, pp. 21-23.
26. MCPS, *492 Ways*.
27. Sanders, *Classroom Questions*, pp. 54-55.
28. MCPS, *United States History and Government I, Course of Study*, Bulletin No. 199 (Rockville, Md.: Montgomery County Public Schools, 1966).
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30. Reprinted by permission of the publisher from David H. Russell and Etta E. Karp, *Reading Aids Through the Grades*. (New York: Teachers College Press, copyright 1938, 1951, by Teachers College, Columbia University), pp. 110-111.
31. Permission to reproduce granted by Paul R. Daniels, The Johns Hopkins University, Baltimore, Maryland. Material available through Maddon Publishing Company, Box 3026, Philadelphia, Pennsylvania, 10150.
32. Wasserman, *Thinking Box*.



5. PREDICTION
Highlights

5. MAKES PREDICTIONS FROM DATA

- Estimating what will probably occur
- Extending given information
(to another situation or to another condition)
- Hypothesizing about future
- Going beyond given information
- Filling in omitted information



- Remember — *certainty* of a prediction is *rare*.
- Be aware of factors which would make a prediction accurate or inaccurate.
- Be aware of factors which would make a prediction probable or improbable.

What might happen if _____?

What will _____ do?

How do you think _____ will behave (react) in the future?

How do you think _____ will behave (react) in _____?
(situation)

What reasonable prediction have/has _____ made? If _____, then what would happen?

Based on _____, can you predict _____? If _____, then what would _____ do?

Instructional Objectives

PREDICTION

5. MAKES PREDICTIONS FROM DATA

- a) Predicts outcome of a narrative
- b) Predicts consequences of courses of action or events within a narrative
- c) Predicts actions or reactions of a character in impending situations
- d) Predicts extension or expansion of trends, tendencies, or conditions presented in verbal or diagrammatic form
- e) Fills in (interpolates) data omitted

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
		*
		*

5. PREDICTION

Discussion

In predicting or extrapolating, the reader translates the communication into terms which are meaningful to him/her; interprets the meaning; and then estimates, predicts, or determines trends, implications, consequences, corollaries, or effects which are in accordance with the conditions described in the original communications but which are not stated there. Thus the communication is extended beyond the limits of the information given by the writer. Some of the ideas of the communication are applied to situations and problems not explicitly included in the communication.

Teachers might use the following approach in defining Prediction with students:

Predicting Outcomes¹

Looking into the future is risky business, especially for the weatherman. Trying to predict

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5. PREDICTION

Discussion

Prediction differs from Application in that the former deals with extension of data to other situations, or conditions; whereas the latter deals with abstractions brought from previous experiences to bear upon the immediate situation. Prediction may extend the original data in several ways.

1. If the original data contain trends within a time range, the prediction may extend these trends in time.
2. If the data deal with one topic or subject, the prediction may extend them to another relevant topic or subject.
3. If the data deal with a specific sample within a general subject area or field, the prediction may pertain to the general subject. Conversely, data dealing with a general subject area may be extrapolated to a specific sample.

In making predictions, the reader needs to develop skill in determining limits to which data can be extended, as well as an awareness that predictions are matters of probability rather than certainty.

5. a) *PREDICTS OUTCOME OF A NARRATIVE*

5. PREDICTION

Narrative

K-6

To help primary children become aware that in their thinking they can go beyond what is factually stated in the reading material, one might start with a discussion of familiar events and situations in their daily lives, the weather and sporting events for instance. Discussion should bring out the idea that some predictions are probabilities, based on known facts, while others are purely opinion, not backed up by factual data. They might discuss how weather predictions are made; on what kind of data they are based; why they are more accurate now than they were a number of years ago; and why they sometimes turn out to be wrong. In discussing athletic events, they could differentiate between wishful thinking and predictions of outcomes based on previous performances of the teams and other pertinent factors.

From making predictions in oral language situations, children could move to making predictions based on simple sequences such as the comic strip. Some comic strips (such as "Blondie" and "Henry") lend themselves to this activity better than others because they often present an easily recognized sequence of events.

The teacher can either mount all of the comic strip frames but the last one, or present them on an overhead projector, and encourage the students to discuss what they think the outcome in the last frame will be. Compare the predictions with the actual outcome shown by the cartoonist.

5. a) *PREDICTS OUTCOME OF A NARRATIVE*

5. PREDICTION
Narrative
K-6

With little children who may tend to identify their ideas with themselves and may therefore be offended if their ideas are rejected, it is important to help them develop the realization that their prediction may be proved false — that although their ideas may be rejected later because of newly-learned factual data in a story, this is not a rejection of the child himself.

Help students to develop further awareness of factors involved in predictions by discussing current news stories, in which the outcome is unknown. Ask the students for their predictions; and keep a record of the predictions, comparing them with the actual outcome of events. If the outcome is different from what the students predicted, discuss what unforeseen events or unrecognized factors caused the outcome to be different from what they expected. Such activities should help students to realize that predictions are matters of *probability* rather than certainty because of unrecognized significant factors or unforeseen future events.

Be alert to opportunities for discussion when unforeseen events or factors bring about an outcome different from what the students had predicted.

Following are some exercises in predicting outcomes which may be done either in discussion or in writing.

Source: *Reading Comprehension Skills*²

Listen to these stories and tell what might happen next.³

1. Bob got out his crayons.
He got out some paper.
What might happen?
2. Mother saw a sweater in the store.
"That sweater is just what I need," she said.
What might happen?
3. Davie put on his coat, his hat, and his boots.
He picked up his school books and kissed his mother and daddy goodby.
What might he do next?
4. Joan asked, "Are you ready to race?"
Wilma said, "Yes, I'm ready. Let's run to the corner and back."
What will they do now?

Read the beginnings of the stories below and think about what the problem will be. Then decide what you would expect to find out if you could read the rest of the story.⁴

5. a) *PREDICTS OUTCOME OF A NARRATIVE*

5. **PREDICTION**
Narrative
K-6

1. Bob sadly watched the train as it moved down the track. Aboard were members of his Boy Scout Troop, but Bob was left behind. Dad's car had had a flat tire and Bob had missed the train.
 2. One afternoon Ron, Ruth, and Don were talking about how much faster one way of traveling is than another. They agreed that an airplane could go faster than a train, and a train could go faster than a car. But how much faster each could go, not one of them knew. They were extremely curious to find out.
-

1. Show a series of pictures from a story and ask students to tell, either in writing or orally, what they think the story will be about.
2. Show students part of a filmstrip or movie. Then have them guess how the filmstrip will end.
3. Show students just the picture part of a filmstrip. Have them write their own script. Then show the complete strip. The students may compare their versions with the author's.
4. Before viewing a television program, have students guess what they may see.
5. Ask students to read the chapter headings of a book and predict what the story will be about. Then have them read the story and compare versions.
6. Have students read to a certain point in the story and ask them to tell or write their versions of the ending. They may explain reasoning behind their versions.
7. In reading a story to the students, stop in the exciting part and let students see whether they can guess what will happen.
8. Students should be encouraged to strive for accuracy in predicting when accuracy is important or possible to ascertain. They should be ready to revise their ideas when new information is introduced.

5. a) *PREDICTS OUTCOME OF A NARRATIVE*

5. **PREDICTION**
Narrative
3-6

A mystery is presented in each chapter of the following books. The reader attempts to solve the mystery by using the clues in the story. The solutions to the mysteries and the explanations are at the back of the book.

If you do not have these books in your media center, they are available as paperbacks.

*Encyclopedia Brown, Boy Detective*⁵
*Encyclopedia Brown Finds the Clues*⁶
*Encyclopedia Brown Gets His Man*⁷
*Encyclopedia Brown Keeps the Peace*⁸
*Encyclopedia Brown Solves Them All*⁹

5. b) *PREDICTS CONSEQUENCES OF COURSES OF ACTION OR EVENTS WITHIN A NARRATIVE*

5. **PREDICTION**
Consequences
K-3

Source: *Reading Comprehension Skills*¹⁰

Read each story and tell two things that will happen in each one. Tell why you think these things will happen. You may think of some other things that may happen.

1. Larry's mother wants a carton of ice cream. She sends Larry to the store for the ice cream. On the way home Larry sees Tom. Larry stops to play catch with Tom. They play ball a long time. What two things happen to the ice cream while they are playing?

It gets colder.
It gets softer.
It begins to melt.

2. Molly's family went away on a long trip. They forgot to shut the bedroom windows. Soon after they left, it rained and snowed and rained and snowed. What two things do you think happened to the bedroom?

The rain and snow came in.
The windows stayed shut.
The bedroom floors got wet.

5. b) *PREDICTS CONSEQUENCES OF
COURSES OF ACTION OR
EVENTS WITHIN A NARRATIVE*

5. **PREDICTION**
Consequences
1-6

This can provide a good oral language experience. Use the film *What If* to stimulate discussion.

What If?

The film provides four situations to which the students should respond appropriately indicating personal understanding of each situation.

5. **PREDICTION**
Consequences
7-12

Select and use part of a film or filmstrip and have the class predict outcomes.

Sample choices

Action and Reaction

Explains Newton's 3rd law in terms of experiments students can do themselves.

Using the film described above, have the students predict what will happen with the experiments.

The Bike

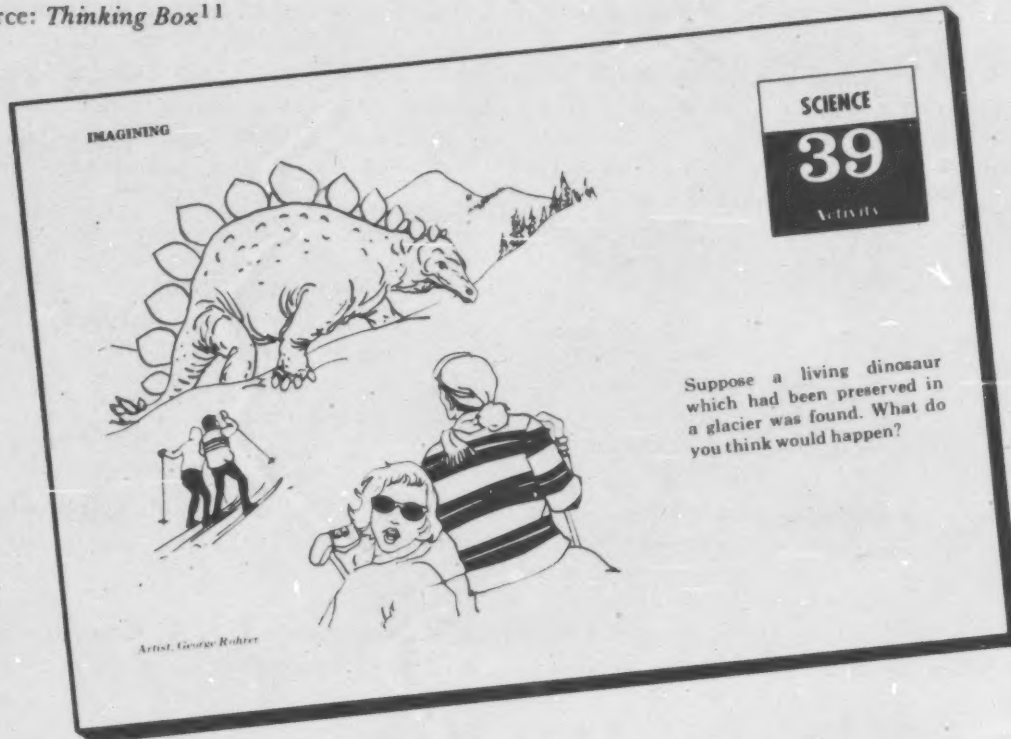
An open-end film. Presents the quandry of two boys who borrow a bike from a third boy and break it.

After viewing this film, have the students discuss what would happen if . . . , or write an outcome to the situation presented.

5. b) **PREDICTS CONSEQUENCES OF COURSES OF ACTION OR EVENTS WITHIN A NARRATIVE**

5. **PREDICTION**
Consequences
5-9

Source: *Thinking Box*¹¹



5. c) **PREDICTS ACTIONS OR REACTIONS OF A CHARACTER IN IMPENDING SITUATIONS**

5. **PREDICTION**
Actions or Reactions
K-3

Source: *Reading Comprehension Skills*¹²

Have students listen to these stories and tell what each of the main characters will do and why.

1. Mother came into the room with Tony's birthday cake. The candles were burning brightly. What did Mother tell Tony to do?
2. Aunt Edie was going to the market. She came out of the house. She got into her car. What did she do then?
3. The Jackson family all like apples. One day Mr. Jackson brought home a big bag of apples. What will the family do with the apples?
4. Joe wants to buy a present for his grandfather. He has seen a tie and a handkerchief that Grandfather would like. Joe does not have enough money for both. What will Joe do?

5. c) **PREDICTS ACTIONS OR REACTIONS OF A CHARACTER IN IMPENDING SITUATIONS**

5. **PREDICTION**
Actions or Reactions
2

Source: *Roller Skates*, "Lazy Jack" (taken from Veronica S. Hutchinson's *Chimney Corner Stories*).¹³

Lazy Jack follows the directions his mother gives him, but applies them to the wrong things. Each incident is related to the next. Jack always applies his mother's directions to the next thing he does.

After reading until the pattern of his actions has been established, stop and ask the students to predict what Jack will do when he meets the next situation.

5. **PREDICTION**
Actions or Reactions
4-6

Source: *Reading Comprehension Skills*¹⁴

In the stories that follow are situations that will be encountered by a girl named Lillian. Have students predict possible courses of action she may take. The teacher may wish to utilize the suggestions below each story.

1. A new girl named Anna has come to Lillian's school from another country. She doesn't know much English and has difficulty understanding it. What might Lillian do?

_____ Wait until Anna learns the English language
_____ Speak loudly so Anna will understand her
_____ Be friendly and help Anna learn English

2. Lillian is walking through the park with her class. A squirrel in a tree interests her so greatly that she isn't watching where she is going. She falls over a bench and hurts her leg. Soon her leg starts to pain. What might Lillian do?

_____ Report her trouble to the teacher
_____ Sit down and cry
_____ Keep walking and bear the pain

5. c) **PREDICTS ACTIONS OR REACTIONS OF A CHARACTER IN IMPENDING SITUATIONS**

5. **PREDICTION**
Actions or Reactions
5-6

Source: *MCPS English Language Arts Bulletin No. 185*, Sample unit p. V-33

House of Sixty Fathers

There are several turning points in the story. Stop just before one of these. Have the students predict Tien Pao's reactions.

Have a discussion about why the character might react in particular ways.

5. **PREDICTION**
Actions or Reactions
7-9

Source: *Stories You Can Finish*, "Race to Taylor's Island"¹⁵

Ted Nokes is a visitor in Florida. Betty Brooks has challenged Ted to a three mile swimming match. There is a cold wind blowing on the day of the match. Ted suggests that they call it off, but Harry O'Conner teases him. Ted takes off his shirt to go, but warns the others of the danger of the rough water. Thelma, Betty, and Harry are all anxious to get the match underway.

Finish the story — How does Ted meet this challenge? What is the reaction of the other characters to Ted?

5. d) **PREDICTS EXTENSION OR EXPANSION OF TRENDS, TENDENCIES, OR CONDITIONS PRESENTED IN VERBAL OR DIAGRAMMATIC FORM**

5. **PREDICTION**
Trends, Tendencies, or Conditions
K-6

The following excerpts from the guide *492 Ways to Use a Newspaper in the Elementary Classroom*,¹⁶ are examples of activities related to making predictions based on data given in a written communication:

- Make predictions of future events. After a lapse of time, use the newspaper and other news media to check accuracy of these predictions.
- Forecast the future. Use a news item which relates plans for the future, such as the erecting of a new shopping center or a new sports arena. Let your story tell of the outcome of the plans.

5. d) *PREDICTS EXTENSION OR EXPANSION OF TRENDS, TENDENCIES, OR CONDITIONS PRESENTED IN VERBAL OR DIAGRAMMATIC FORM*

5. **PREDICTION**
Trends, Tendencies, or Conditions
K-6

- "I Predict" -- Use a news item. Discuss what the situation might be if _____.
- Find instances in which people have shown quick thinking in an emergency. Dramatize what you might have done.
- Listen to the weather news for the day. Then:

Predict the weather for the next day.

Tell what you should wear.

Describe different kinds of jobs that can or cannot be performed because of the weather.

5. **PREDICTION**
Trends, Tendencies, or Conditions
4-6

Suggestions for predicting outcomes in various subject fields:

1. Construct multiple-choice statements which will develop the skill of predicting outcomes. As an example: "If black paint and white paint are mixed, the resulting color will be: (1) green (2) gray (3) blue (4) yellow."
2. The skill can be practiced profitably in arithmetic by asking pupils to estimate answers to certain problems. If they are able to estimate accurately, they can ascertain the correctness of a given answer with a degree of accuracy.
3. Ask the students to predict the effect of freezing on the weight of a given quantity of water. Students weigh a measured amount of water, freeze it, and weigh it as ice to test the accuracy of their predictions.

5. d) *PREDICTS EXTENSION OR EXPANSION OF TRENDS, TENDENCIES, OR CONDITIONS PRESENTED IN VERBAL OR DIAGRAMMATIC FORM*

5. **PREDICTION**
Trends, Tendencies, or Conditions
7-12

(The following exercise may be for individual students or for committees of students.)

Assign each student to bring to school a news article from the newspaper of the previous day. The article must refer to an event that occurred in a foreign country. Using the article, an atlas, and any other available resources, students then predict:

1. What kind of weather the capital city might be having today (temperature, rain, clouds)
2. What types of noises one might hear in this city
3. What kinds of clothing most people would be wearing today
4. What types of activities the farmers of this country would be engaged in today
5. What kinds of diplomatic relations this country may have with the United States a year from now
6. What the general living conditions of this country are
7. How the events of this news article would affect the people of this country
8. In what ways the facts of this article could have changed by a month from today

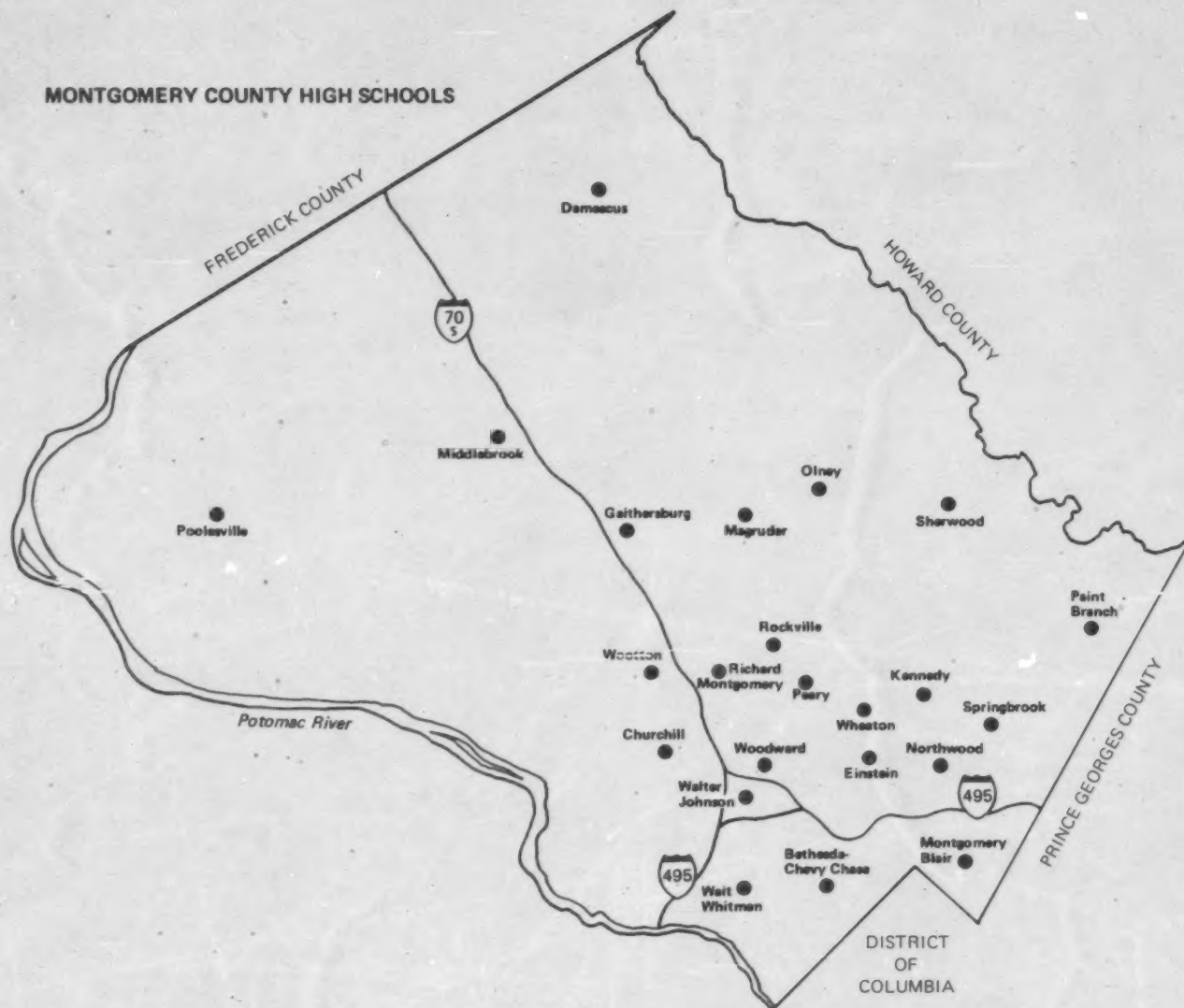
Use the map and graph which follow to complete this prediction exercise on the enrollment of selected Montgomery County High Schools.

Examine the trends of school enrollment in the eight selected high schools on the graph, and locate these schools on the map. Take note of such factors as nearness to the District of Columbia, Prince Georges County, Rte. 495, Rte. 70-S, and the dense areas of population in Montgomery County. Using these factors, determine the enrollment trends of the other county high schools. Below are 1972 enrollment figures.

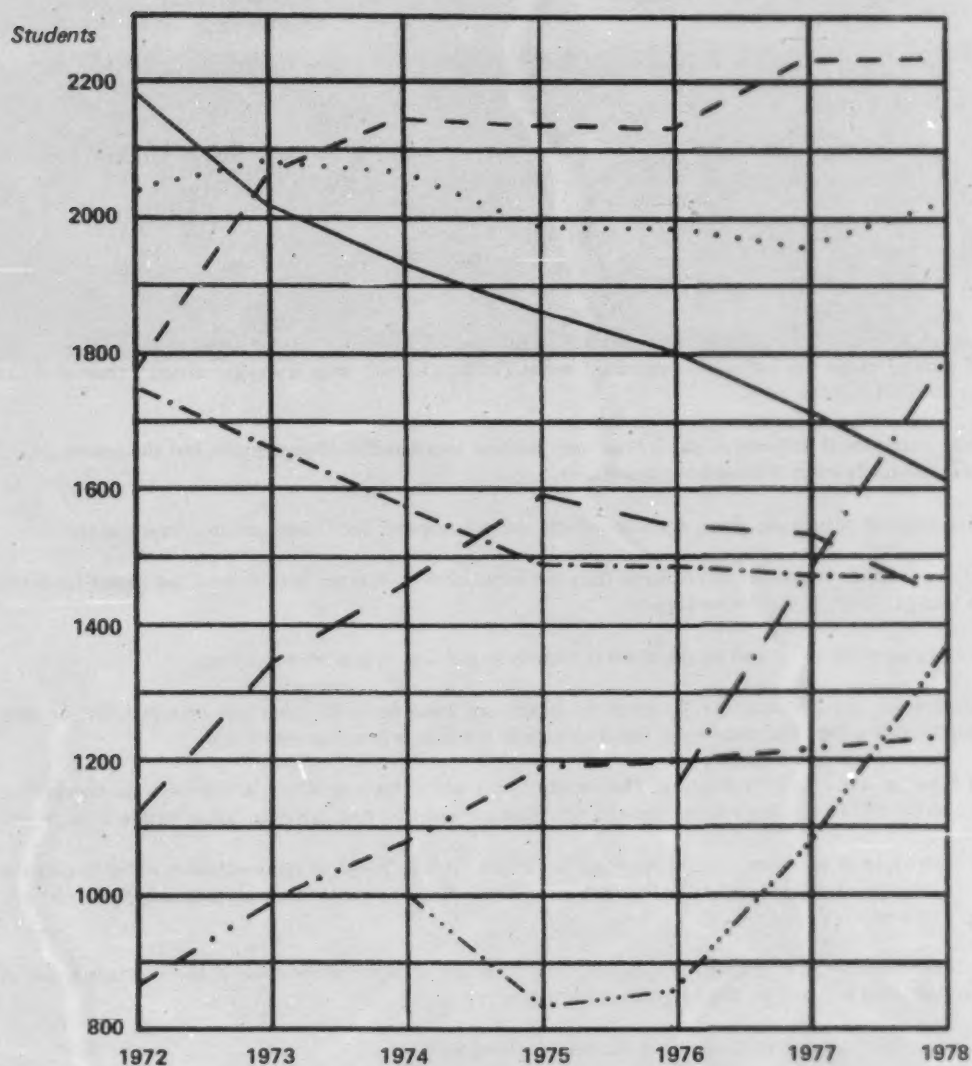
Churchill	1740
Einstein	1375
Walter Johnson	1700
Kennedy	1278
Richard Montgomery	1472
Northwood	1692
Paint Branch	1098
Peary	1923
Poolesville	581
Rockville	1146
Sherwood	991
Wheaton	2061
Woodward	1029
Wooton	1173

5. d) *PREDICTS EXTENSION OR EXPANSION OF TRENDS, TENDENCIES, OR CONDITIONS PRESENTED IN VERBAL OR DIAGRAMMATIC FORM*

5. **PREDICTION**
Trends, Tendencies, or Conditions
7-12



ENROLLMENT OF SELECTED MONTGOMERY COUNTY HIGH SCHOOLS



WALT WHITMAN —————
 MONTGOMERY BLAIR
 GAITHERSBURG - - - - -
 BETHESDA-CHEVY CHASE - . - . - .

MAGRUDER — — — — —
 DAMASCUS - - . . - - . .
 MIDDLEBROOK -
 OLNEY — . — . — .

5. d) *PREDICTS EXTENSION OR EXPANSION OF TRENDS, TENDENCIES, OR CONDITIONS PRESENTED IN VERBAL OR DIAGRAMMATIC FORM*

5. **PREDICTION**
Trends, Tendencies, or Conditions
10-12

Source: *The Futurist*¹⁷ (available at the Montgomery County Educational Materials Laboratory). Content in this publication covers diverse areas of interest. An example follows:

TRANSPORTATION

The world's transportation systems are rapidly improving.

What is happening: Transportation costs have been steadily declining. Today's ships carry as much as

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5. d) *PREDICTS EXTENSION OR EXPANSION OF TRENDS, TENDENCIES, OR CONDITIONS PRESENTED IN VERBAL OR DIAGRAMMATIC FORM*

5. **PREDICTION**
Trends, Tendencies, or Conditions
10-12

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5. d) *PREDICTS EXTENSION OF CONDITIONS PRESENTED IN DIAGRAMMATIC FORM*

5. **PREDICTION**
Trends, Tendencies, or Conditions
10-12

Source: *The Futurist*¹⁸ (available at the Montgomery County Educational Materials Laboratory). Content in this publication covers diverse areas of interest. An example follows:

THE DEPLETION OF FOSSIL FUELS
A Survey of Past Forecasts

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5. e) *FILLS IN (INTERPOLATES) DATA*
OMITTED

5. **PREDICTION**
Interpolation
2-6

Source: *MCPS ELA Bulletin No. 185*

Grade 2: *Stone Soup* p. II-8

The author says that after they were refused, the soldiers talked together. What do you think they said to each other? Let's choose three people to be the soldiers and listen to them talk things over.

Grade 3: *Winnie the Pooh* p. III-20

Have children predict the outcome, decide where all the Woozles come from, and guess what happened to Eyecore's tail.

Grade 4: *Mr. Popper's Penguins* p. IV-12

This is a story about a family which really did receive some live penguins from the South Pole. What would happen to the family's ordinary routine? What financial problems might result?

Grade 5: *How Many Miles to Babylon* p. V-23

Why do you think James changes his views on the ring, the ritual, and the prince? What information does the story give you on which you base your ideas?

Grade 6: *Follow My Leader* p. VI-27

Based on what Mrs. Carter did, what do you think she meant when she said, "Jimmy is entering a long dark corridor"?

5. **PREDICTION**
Interpolation
7-12

USING THE ENCYCLOPEDIA

*Can Elephants Swim?*¹⁹ Ask students to look up the answers to the improbable questions posed in this book such as "Can elephants swim?" After reading about the appropriate topic in another encyclopedia, have the students predict, from what they have read, what the answer to these questions will be. Then give them the answers found in the book.

5. e) *FILLS IN (INTERPOLATES) DATA*
OMITTED

5. PREDICTION
Interpolation
7-12

Below is a list of statistics for Mexico's leading export crops. Complete statistics are given for 1968 and 1970, and statistics for the percent of cultivated cropland is given for 1972. Have students fill in the data for the percent of total value of exports for 1972. Consider some of the following factors to aid in making your prediction:

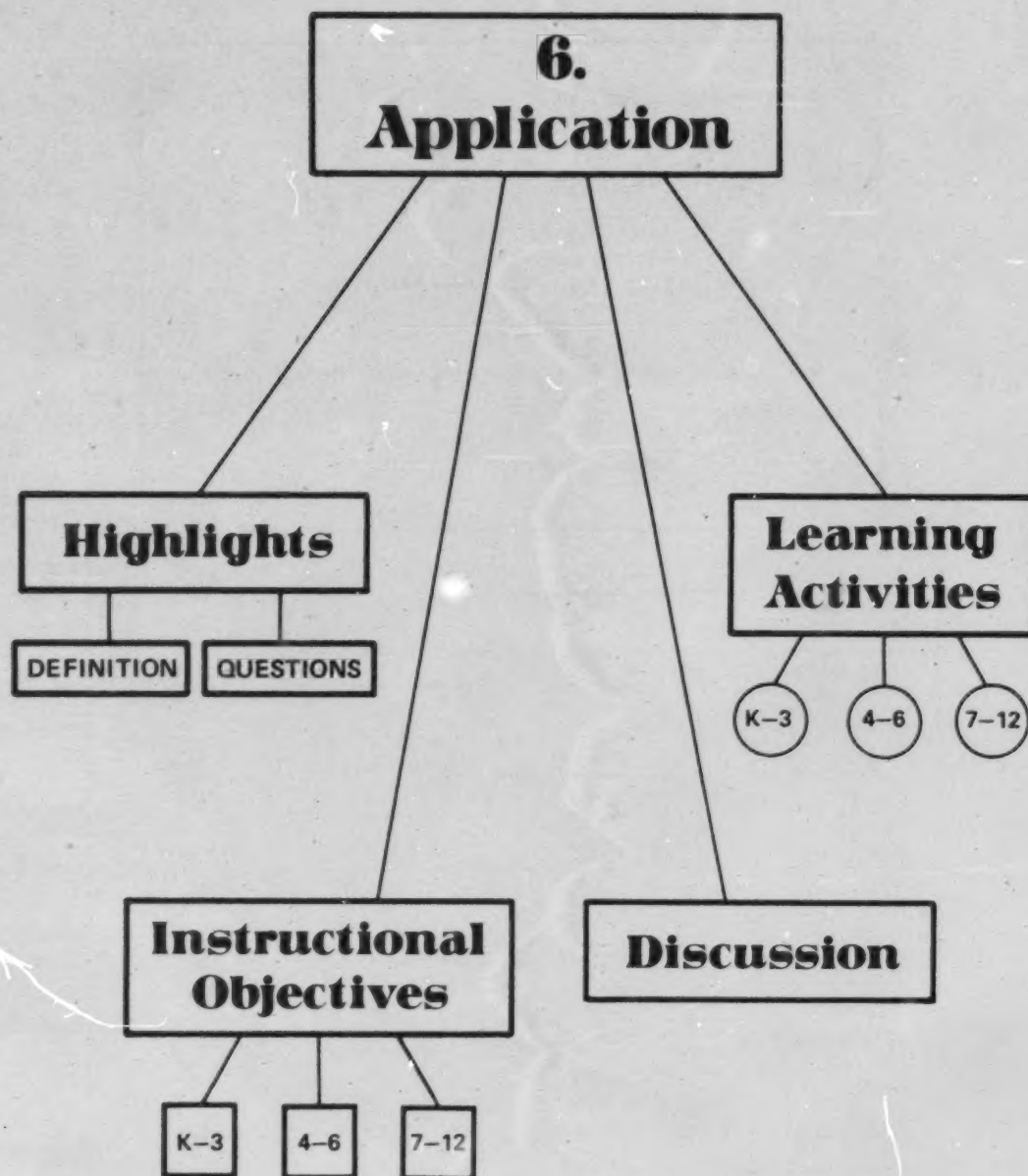
- ... changes in the ratio of percent cultivated cropland to percent of value from 1968 to 1970
- ... changes in the domestic use of a crop by Mexico
- ... the dollar yield per acre of a crop
- ... the trends in world-wide needs of these crops
- ... weather as a stable element (even though it greatly influences the yields of these crops)

	1968		1970		1972	
	percent of cultivated cropland	percent of total value	percent of cultivated cropland	percent of total value	percent of cultivated cropland	percent of total value
Corn	24.0	3.7	23.1	3.3	22.7	—
Cotton	3.9	13.6	4.1	13.7	4.2	—
Sugar	1.5	6.8	1.7	7.9	2.05	—
Coffee	0.20	5.2	0.23	5.7	0.31	—
Tomatoes	0.28	4.6	0.29	4.4	0.28	—

(Related activities can be found in 4. b) (3) (c) and 3. a) (5).)

FOOTNOTES

1. From *Read Better--Learn More, Book A*, by Theodore Clymer and others, © Copyright, 1972, by Ginn and Company [Lexington, Mass.], pp. 185-187. Used with permission.
2. D.C. Reading Center and Department of Elementary Supervision, *Reading Comprehension Skills* (Washington, D.C.: District of Columbia Public Schools, 1971), p. 6-N.
3. *Ibid.*, p. 11-N.
4. *Ibid.*, p. 1-N.
5. Donald J. Sobol, *Encyclopedia Brown, Boy Detective* (Camden: Thomas Nelson Co., 1963).
6. ———, *Encyclopedia Brown Finds the Clues* (Camden: Thomas Nelson Co., 1966).
7. ———, *Encyclopedia Brown Gets his Man* (Camden: Thomas Nelson Co., 1967).
8. ———, *Encyclopedia Brown Keeps the Peace* (Camden: Thomas Nelson Co., 1969).
9. ———, *Encyclopedia Brown Solves Them All* (Camden: Thomas Nelson Co., 1968).
10. DCPS, *Reading Comprehension Skills*, p. 6-N.
11. Selma Wasserman, Jack E. Wasserman, and Louis E. Rath, *The Thinking Skills, Thinking Box* (Westchester, Ill.: Benefic Press, 1969).
12. DCPS, *Reading Comprehension Skills*, p. 1-N.
13. Helen Huus, Robert J. Whitehead, and Henry A. Bamman, *Roller Skates* (San Francisco: Field Educational Publications, Inc., 1971), pp. 137-144.
14. DCPS, *Reading Comprehension Skills*, p. 12-N.
15. Editors of *Read Magazine, Stories You Can Finish* (Columbus: Xerox Corporation, American Education Publications, 1969), p. 4.
16. MCPS, *492 Ways to Use a Newspaper in the Elementary Classroom*, Bulletin No. 242 (Rockville, Md.: Montgomery County Public Schools, 1970).
17. *The Futurist*, published by the World Future Society, P.O. Box 30369, Bethesda Branch, Washington, D.C. 20014, December 1972, pp. 228-229. Reprinted by permission.
18. *Ibid.*, August 1972, p. 152. Reprinted by permission.
19. Robert H. Jones (comp.), *Can Elephants Swim?* (New York: Time-Life Books, 1969).



6. APPLICATION
Highlights

6. APPLIES PREVIOUSLY LEARNED SKILLS OR GENERALIZATIONS TO NEW SITUATIONS
AND PROBLEMS

- Transferring learning
- Using *old skills* for *new purposes*
- Using previous learning in new situation
- Making use of the familiar to explain the unfamiliar
- Emphasizing the *logic* of experimental ideas

Can you solve this _____?

How can you use _____ for _____?

What _____ is needed to _____?
(skill, generalization)

Which _____ explains _____?

Is this _____ relevant to this _____?

Why can't this _____ be used to _____ this problem?

What have you learned about _____ that is related to this
_____?

How does this _____ affect _____?

Instructional Objectives

APPLICATION

6. *APPLIES PREVIOUSLY LEARNED SKILLS OR GENERALIZATIONS TO NEW SITUATIONS AND PROBLEMS*

- a) Identifies and/or restates a problem to determine skills or generalizations necessary to its solution
- b) Selects skills or generalizations applicable to a problem
- c) Uses appropriate skills or generalizations
 - (1) To solve a problem
 - (2) To explain new phenomena
 - (3) To determine a course of action
 - (4) To justify a decision
- d) States the reasoning used in applying a particular skill or generalization in a given problem situation
 - (1) States relevancy of the skill or generalization
 - (2) States limitations of the skill or generalization

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
	*	*
		*
		*
		*
		*
		*

6. APPLICATION

Discussion

The thought process at the level of application is the use of a skill, a rule, or a principle learned in one context to solve a problem presented in a new context. Learning to apply principles and generalizations to new problems and situations is considered to be not only one of the more complex and difficult objectives of education but also one of the most worthwhile. Smith and Dechant point out that if application or "transfer were not possible, the learner would have to acquire new behavior for each new situation."¹ The student improves his ability to cope with the conditions and problems of the society in which he lives and acquires intellectual independence from the adult authorities who control his early life. Evidence has indicated that application learning is likely to be more lasting than many other types of learning.²

Sanders describes some of the characteristics of application questions as follows: They present problems that approximate the form and context in which they would be encountered in life. They require identification of the problem and selection and utilization of appropriate principles and generalizations. They deal with knowledge which has explanatory or problem-solving power, knowledge which is transferable to a variety of new situations. They deal with the whole of ideas and skills rather than solely with the parts. If previous instruction has dealt with segments or parts of a set of ideas or a process, the application question should require the student to reassemble the ideas and skills into a whole. Not all generalizations or principles can be used in application questions. Some ideas do not lend themselves to applying to new situations; others are not sufficiently important. Finally, application questions include as few directions as possible, because the student is expected as a result of previous instruction to know what to do. When he is dealing with a problem that resembles a real-life situation, the student should be able to act independently; in real adult life there will be no teacher or other adult present to direct him.³

By "new problem" is meant a problem new to the student or having some element of newness or unfamiliarity that keeps it from being identical to those the student has already encountered in the instructional situation. The solution should require more than just remembering the solution to a similar or identical problem in class. Such an activity requires merely memory or translation. The difficulty of the problem will be determined partly by the degree of difference from problems previously encountered in the instructional situation. A new problem should "require the student to search through his memory of principles and generalizations to find those which are relevant" and to "use the principles and generalizations somewhat differently from the way he has used them previously." The problem should be solvable in part by the use of the appropriate principles or generalizations.⁴

Application questions and assignments are widely used in the various subject fields. Herber notes that most skills, including those in the category of Application, which are listed in courses of study as being unique to a content area are simply unique in the way they are worded rather than in the actual behavior required. He points out that "uniqueness of each subject lies in the nature of the content and the materials used in each area, not in the skills applied to the materials. Skills required in one subject are generally appropriate to other subjects."⁵

6. a) IDENTIFIES AND/OR RESTATES
A PROBLEM TO DETERMINE
SKILLS OR GENERALIZATIONS
NECESSARY TO ITS SOLUTION

6. APPLICATION
Restatement of Problem
4-12

Students may need to change the wording, order, or emphasis in the statement of a problem before they begin to solve the problem. For example, the student might:

- carefully read through the problem to find what is given and what is needed
- decide which parts of the problem are irrelevant or unnecessary and delete or ignore them
- put the parts of the problem into a different order
- restate or redefine the problem to clarify what must be done to solve it

Restatement seems particularly necessary in many mathematical problems which require the student to relate to previously learned processes.

Some students will need a great deal of practice in restating written math problems so as to determine the essential information.

6. b) SELECTS SKILLS OR GENERALI-
ZATIONS APPLICABLE TO A
PROBLEM

6. APPLICATION
Skills in Problem Solving
K-3

The primary teacher may begin helping children develop skill in applying what they have learned on a very simple level in oral language situations. Through discussion, children can develop awareness of the importance of using what they learn. Discussion may center on learning about things which will help them meet new situations that they will face in real life as they mature. Many and varied opportunities should be given for application of knowledge to new problems in oral language situations, so that children who cannot readily apply their learning to new situations will be able to listen to others who can do this kind of thinking, without being penalized themselves before they have developed these skills.

In *Reading in the Elementary School*, Spache and Spache discuss the ideas set forth by Saunders in *Classroom Questions* and then suggest the following kinds of questions for encouraging children to apply previously learned generalizations, facts, and values to problem solving in a behavior-centered situation:

6. b) *SELECTS SKILLS OR GENERALIZATIONS APPLICABLE TO A PROBLEM*

6. **APPLICATION**
Skills in Problem Solving
K-3

"How can we show that we need a traffic policeman at the crossing at the south end of our school?"

If we want to raise hamsters in our classroom, what sort of plans will we have to make?

John has been ill for several days. What could we do to help him during his illness? To show him we think of him?"⁶

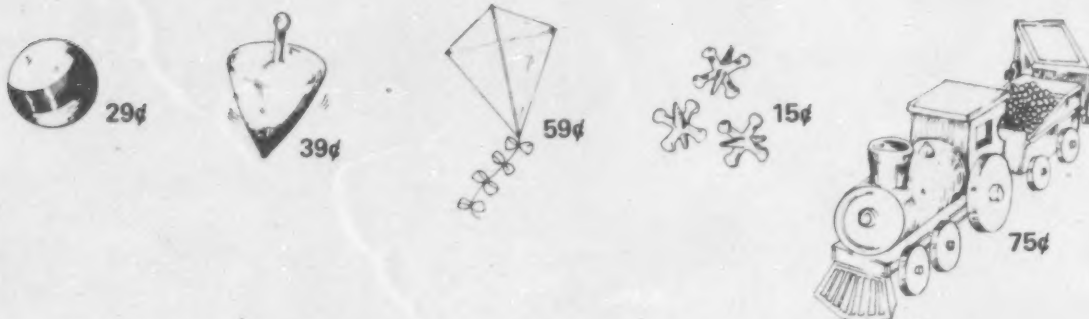
6. b) *SELECTS SKILLS APPLICABLE TO PROBLEM*

6. c) (1) *USES APPROPRIATE SKILLS TO SOLVE A PROBLEM*

6. **APPLICATION**
Skills in Problem Solving
K-6

TOY STORE PROBLEMS

Draw five or more toys and under each toy write its price. Under these, write several questions which the students may answer by filling a numerical answer in a blank or putting "Yes" or "No" at the end of the sentence.



1. The ball and top together cost _____¢.
2. The train costs _____¢ more than the kite.
3. The kite costs more than the top. _____ (Yes or No)
4. The jacks, top, and kite together cost _____¢.
5. The jacks cost less than the train. _____ (Yes or No)
6. The kite costs _____¢ less than the train.

6. b) *SELECTS SKILLS APPLICABLE
TO PROBLEM*
6. c) *(1) USES APPROPRIATE SKILLS
TO SOLVE A PROBLEM*

6. APPLICATION
Skills in Problem Solving
K-6

SHOPPING AT THE SUPERMARKET

Jack's mother sent him to the supermarket. He bought a can of peaches for 45¢ and two cans of soda for 15¢ each. How much money must he pay to the clerk?

1. Which of the following facts are you asked to find?
 - a) The number of cans Jack bought
 - b) The change he should receive
 - c) How much they cost him all together
 - d) How much money Jack had
2. Which of the following facts is told?
 - a) The price of each item
 - b) How much money Jack had
 - c) The kind of soda he bought
 - d) How much he gave the clerk
3. Which of the following is the nearest correct answer?
 - a) 60¢
 - b) \$1.20
 - c) 30¢
 - d) \$4.00
4. To solve this problem, what must you do? What is the first step in solving this problem?
 - a) Addition
 - b) Subtraction
 - c) Multiplication
 - d) Division

6. c) (1) *USES APPROPRIATE GENERALIZATIONS TO SOLVE A PROBLEM*

6. **APPLICATION**
Problem Solving
3-4

Source: *MCPS Social Studies Curriculum Illustrative Units (K-6)*

Grade 3:

(p. 123) Discuss what you would do if you had to live in a Congo village and give up your way of life. How would you adapt yourself to the environment?

Grade 4:

(p. 5) Hold a debate: Which scientific or technological development was of greatest influence during the age of exploration?

Make a report on Gutenberg's printing press. Discuss how this invention was related to increased interest in exploration.

6. **APPLICATION**
Problem Solving
5-9

Have students plan a real or imaginary trip. For example, in the fifth grade social studies, students could plan such a trip to some place in the United States. Some of the kinds of thinking that would be utilized are:

Location — of information in travel brochures about places of interest to visit

Translation — of symbols on a road map into verbal information

Interpretation — of relationships of place, distance, time, direction, altitude, indicated on the maps; comparisons of various places

Evaluation — of alternative routes, using criteria set by the class

In *Classroom Questions, What Kinds?*, Sanders gave the following example of a subject-centered application task. This particular example was based on the generalizations emphasized in the social studies book *Ways of Our Land*.⁷ At the end of the year the teacher presents the students with a passage describing the mythical country of "Beta." The students are instructed to tell how Beta is like the United States and how it is unlike, and to detect contradictions of the principles they have learned. For teachers who would like to try such an activity, the text of the description of "Beta" is given in *Classroom Questions*.⁸

6. c) (1) **USES APPROPRIATE GENERALIZATIONS TO SOLVE A PROBLEM**

6. **APPLICATION**
Problem Solving
5-9

Students are asked to illustrate some scientific principle. For example, they could be given a sheet of paper with three squares of equal size and asked to illustrate the three states of matter — solid, liquid, and gas. Water is used as an example. Some students might draw upon their own experiences to depict such things as a block of ice, waves, raindrops, a steaming teakettle. Others who will use their skill in locating scientific information and in translating verbal information into diagrammatic form might come up with more original solutions to the problem, such as showing water molecules in different degrees of compactness and moving at different rates of speed.

INTERVIEWING THE POLITICIANS

In connection with study of political parties, a class might be assigned the task of interviewing representatives of local political party organizations. Tasks involved would be learning about the background of the political parties, arranging for the interviews, organizing into groups to plan the questions, setting up appropriate questions, organizing the findings, and reporting them to the class.

6. **APPLICATION**
Problem Solving
4-12

"The mastery of skills is not complete until the student uses them successfully in the application category."⁹ One of the practical situations in which both elementary and secondary students are called upon to apply previously learned skills is the writing of reports or term papers based upon research. Sanders gives an outline of the skills learned at various levels which mature high school students should be able to combine and apply to producing such a paper. While such a mature student should be able to follow these procedures with a minimum of direction from the teacher, less mature students will need varying amounts of direction, depending on their levels of development. The secondary social studies teacher may find the outline prepared by Sanders useful in assigning the writing of independent research papers. Elementary school teachers may also find this outline a useful summary of the skills involved in writing such a paper, in determining what activities are appropriate to their students' levels of development. Sanders suggests that after appropriate instruction on the Location and Recall and Interpretation levels, elementary students "can be assigned a simple report that calls for locating information, paraphrasing ideas, organizing ideas into an outline, and writing or orally presenting the report. For students in the upper elementary school, this amounts to application at the level of responsibility appropriate to them."¹⁰

6. c) (1) USES APPROPRIATE GENERALIZATIONS TO SOLVE A PROBLEM

**6. APPLICATION
Problem Solving
5-6**

Source: *MCPS Teaching Science in the Elementary Schools* (to be published)

Selected Outcomes

Students should have experienced activities which enable them, within their individual capabilities, to:

- investigate by recognizing data collecting and using data in solving problems
- differentiate between reliable and less reliable resources of information . . .
- withhold judgments until they consider all available evidence
- recognize and acknowledge a job well done and be aware of feeling personal satisfaction in their accomplishments and contributions

Content Area

The universe is in constant change.

Substantive Topic (suggested level)

Radiant Energy of Stars (Level 6)

Activity (Title and Description)

Investigation into Sampling (CIS, Brown)

The students will perform activities using common household foodstuffs such as beans, peas, and macaroni to gain an understanding of large numbers and estimation. They will attempt to count the number of items in a pound by taking a spoonful of beans, counting them, recording the count, putting them back, and repeating the procedure five times. After they have completed the process they will determine the average number of items in a spoonful. The students will then determine the number of spoonful per pound.

Behavioral – Performance Objectives

The student will demonstrate his ability to apply rough estimates in science by estimating the number of items per pound.

Alternate Activity (Title and Description)

An Investigation into Measuring Distant Objects (CIS, Brown)

The students will perform an activity to learn how to measure the size of a distant object. Using a 1x1 card, a lamp, and a ruler, they will measure the size of the lampshade. With the help of a classmate they will record their observations, using the same unit of measure throughout the activity.

6. c) (1) **USES APPROPRIATE SKILLS
OR GENERALIZATIONS TO
SOLVE A PROBLEM**

6. **APPLICATION**
Problem Solving
5-12

"Where Am I?" or "Who Am I?" or "What Am I?"

A student selects a topic for *where*, *who*, or *what*. The student then makes up five questions of progressive difficulty about the topic, the most difficult question first. Each student then reads his lists of clues in class; and the other students try to guess *where*, *who*, or *what* he is. If a student guesses on the first clue, he gets five points; on the second clue, four points, etc. Below is a sample list of clues for *Where Am I?*

1. I am working on a cattle ranch in the country which produces one-fourth of the world's beef.
2. It is extremely hot outside and the month is January.
3. Our country is the second largest in our continent and 24 million people live here.
4. The cowboys of our country are called *gauchos*.
5. Our beef is shipped across the pampas to Buenos Aires to be shipped northward.

6. **APPLICATION**
Problem Solving
7-12

Students can be given oral or written exercises in which they use knowledge of Greek and Latin bases (roots) to work out meanings of unfamiliar words.

See pages A-122-129, *Teaching Reading Skills*, Bulletin No. 246 for a list of such roots.

Example:

Knowing

astronomy + nautical

Helps work out

astronaut

6. **APPLICATION**
Problem Solving
10-12

In *Classroom Questions, What Kinds?* Sanders cites several behavior-centered application problems in the social studies.¹¹ Two examples:

6. c) (1) *USES APPROPRIATE SKILLS
OR GENERALIZATIONS TO
SOLVE A PROBLEM*

6. APPLICATION
Problem Solving
10-12

1. The Citizenship Education Project of Columbia University¹² utilizes an instructional procedure called a "laboratory practice" to teach citizenship through student action on problems of the school and community. Using the criteria that a laboratory practice must be real, have focus, have purpose, involve gathering firsthand information, and involve taking action, the Citizenship Education Project has defined over one hundred recommended projects, including setting up a youth traffic court; conducting a national citizenship day program; raising funds for international relief; and forming a civil defense medical team. The program includes suggestions for tying each activity to subject matter. For example, a pamphlet entitled *Premises of American Liberty* summarizes the basic democratic values of the United States which may be related to student problems.¹³
2. Sociodrama goes beyond the translation level. . . . Students dramatize the operation of a governing body, such as the United Nations General Assembly or the local government. What takes such an activity beyond the translation level and places it in the application category is the requirement that students study the operations of such organizations, the issues facing them, and the logical reaction to be expected of the participants, so that they can play their roles accurately, in keeping with the realities of such situations.

As an example of a subject-center application question, Sanders describes an activity for a ninth grade citizenship course similar to the one described above for the intermediate level. Students were required to apply previously-learned principles of American government and capitalism and the previously-learned skill of writing an essay. They were given a detailed description of a mythical country called "Alpha" and directed to write an essay on the ways in which Alpha followed or violated "the basic principles of the United States government and the principles of modified capitalism." (For teachers who would like to try a similar activity, the description of Alpha given on pages 85-87 of Sanders might be useful). Sanders points out that this assignment has the following characteristics of application questions: It is related to real-life problems of competing political and economic ideologies; it deals with sets of ideas rather than with parts; and it assumes that the students will be able to perform the task without explicit directions as a result of previous instruction.¹⁴

6. c) (2) *USES APPROPRIATE GENERAL-
IZATIONS TO EXPLAIN NEW
ACTION OR CHANGE (NEW
PHENOMENA)*

6. APPLICATION
New Phenomena
4-6

Consider these ideas in oral discussions:

Note that the students would

- (1) First need to make a prediction
- (2) Then discuss the justification for their prediction (in other words, what GENERALIZATION did they use in making the prediction?)

6. c) (2) *USES APPROPRIATE GENERALIZATIONS TO EXPLAIN NEW ACTION OR CHANGE (NEW PHENOMENA)*

6. **APPLICATION**
New Phenomena
4-6

What might happen if . . . ? Why?

1. . . . you hold a piece of chocolate candy in your hand for quite a while
2. . . . you drop and break a bottle of ammonia
3. . . . you are baking a birthday cake for your brother and you burn it
4. . . . you put too many clothes in the dryer
5. . . . you've built a great snowman and the temperature for the next two days is 40° F
6. . . . you buy two house plants and water one every day but forget to water the other one

6. c) (3) *USES APPROPRIATE GENERALIZATIONS TO DETERMINE A COURSE OF ACTION*

6. **APPLICATION**
Generalizations/Course of Action
4-6

Source: *MCPS Elementary Social Studies Curriculum Illustrative Units, Volume II (4-6)*

Grade 4: "Across the Ocean to the New Lands"

(p. 4) The generalization:

Ideas, material wants, and moral and spiritual values are powerful motivating forces in man's development and movement.

- Discuss why there was a need for a water route to the Far East and what were some of the factors influencing travel routes.
- Dramatize a meeting in which several merchants are discussing the possibilities of supporting an expedition to the Far East. They should consider such things as:

Expectations for profitable returns
Necessary supplies and personnel
Route to be taken

6. c) (3) *USES APPROPRIATE GENERALIZATIONS TO DETERMINE A COURSE OF ACTION*

6. **APPLICATION**
Generalizations/Course of Action
4-6

Grade 5: "The Sunny Dry Southwest: Booming Population with Water Problems"

(p. 55) The generalization:

Resources of the environment may influence man's way of making a living.

- What are the natural resources [of the region]?

Climate	Fertile soil	minerals
Fish	Forests	

- What effects did the discovery of gold have on settlement and development?

Grade 6: "The Gifts of Ancient Egypt"

(p. 115) The generalization:

The domestication of food plants and animals made possible the cultural ramifications that are the bases of civilization.

- Agriculture was improved through man's ingenuity in meeting his needs.
 - Use of plows and domesticated animals
 - Domestication of native grains
 - Irrigation techniques
 - Measurement of land
 - Measurement of time
- Read and have a class discussion of the improvements that helped farming and agriculture.

Grade 6: "Greece Advances Civilization"

(p. 123) The generalization:

Some form of education is essential to the maintenance of a culture.

- The beginnings of a democratic form of government in Greece created a need for a system of education to prepare citizens for participation in the governing process.

Explain the importance of both of these:

memorization of literature—public speaking—philosophy—political science—the arts

6. d) (1) STATES RELEVANCY OF THE
SKILL OR GENERALIZATION
6. d) (2) STATES LIMITATIONS OF THE
SKILL OR GENERALIZATION

6. APPLICATION
Reasoning
9-12

The *Handbook on Formative and Summative Evaluation of Student Learning*¹⁵ gives examples of test items that require the student to indicate his reasoning for the use of particular principles or generalizations in a given problem situation. The authors point out that this is the most complex Application behavior. Secondary social studies and science teachers may find the examples useful.

6. APPLIES PREVIOUSLY LEARNED
SKILLS OR GENERALIZATIONS TO
NEW SITUATIONS AND PROBLEMS

6. APPLICATION
Newspapers
K-6

The following excerpts from the guide *492 Ways to Use a Newspaper in the Elementary Classroom*¹⁶ are examples of activities related to applying previously learned skills or generalizations to new situations and problems:

Oral Communication: Have students select a topic, such as

- "Holiday Fun"
- "People Who Have Helped Us This Week"
- "Building Safer Vehicles"

and bring in newspaper articles or pictures that illustrate the topic. Tell how each relates to the topic.

Health: Choose advertisements of foods that would be appropriate if you were

- going on a picnic
- having a formal dinner
- going camping
- going mountain climbing
- going on a flight in space

Give reasons for your choice.

Choose a healthful dinner for the following:

- a growing boy or girl
- an office worker
- a farmer
- a puppy or kitten

6. APPLIES PREVIOUSLY LEARNED
SKILLS OR GENERALIZATIONS TO
NEW SITUATIONS AND PROBLEMS

6. APPLICATION
Newspapers
K-6

Discuss ways in which they are similar and how they are different.

Safety: Make "My Safety Book," using pictures and clippings that emphasize safety

at home
on the street
at school
in public places

Collect pictures of toys that are used on the sidewalk. Explain the safe use of each.

Study ads to find objects which should be used with extreme caution such as

scissors	ropes	power mowers
knives	chemistry sets	bows and arrows

Mathematics: Report to the class on the number of column inches allotted to

particular subjects
advertisements

Use advertisements, news items, feature stories, etc., and tell, underline, or list words or phrases that illustrate concepts such as those below:

Concepts of *size* such as:

biggest	short	trial size
greatest	small	king size
smallest	head size	shortest
tallest	average	longest
	above average	

Concepts of *location* such as:

low	under	far	bottom
high	over	below	near
top	beside	above	

Concepts of *time* such as:

six-weeks' trip	today
last ten years	tomorrow
thirty-six years' continuous growth	next week
	this year

6. APPLIES PREVIOUSLY LEARNED
SKILLS OR GENERALIZATIONS TO
NEW SITUATIONS AND PROBLEMS

6. APPLICATION
Newspapers
K-6

Concepts of *quantity* such as:

all
none

many
more

fewer
most

minimum
maximum

Use the financial page to study market quotations and work problems:

Choose one block of stock and follow it for a given length of time. Pretend you purchased ten shares of certain stock. Each day, compute percentage of profit or loss. Imagine you have \$1,000 to invest. Buy shares of favorite stock. Watch stock tables for a given time. Determine whether investments have grown or shrunk.

Practice writing a classified advertisement for selling an item. Study the classified ads. Discuss the need for brevity, what appeal to make to the reader, and other items to include.

Study the letters to the editor. Choose a letter to answer. Your letter may support or oppose the view of the published letter.

Order merchandise from the advertisements.

Read the amusement page. Order tickets for a performance.

Social Studies: Use a news item of a happening in your own country. Imagine how the story might have been written from the point of view of a person from another country. An account of a student protest may have appeared in your paper. How would a Russian reporter write the article?

Travel through the papers. Select a country. Use the newspaper to determine:

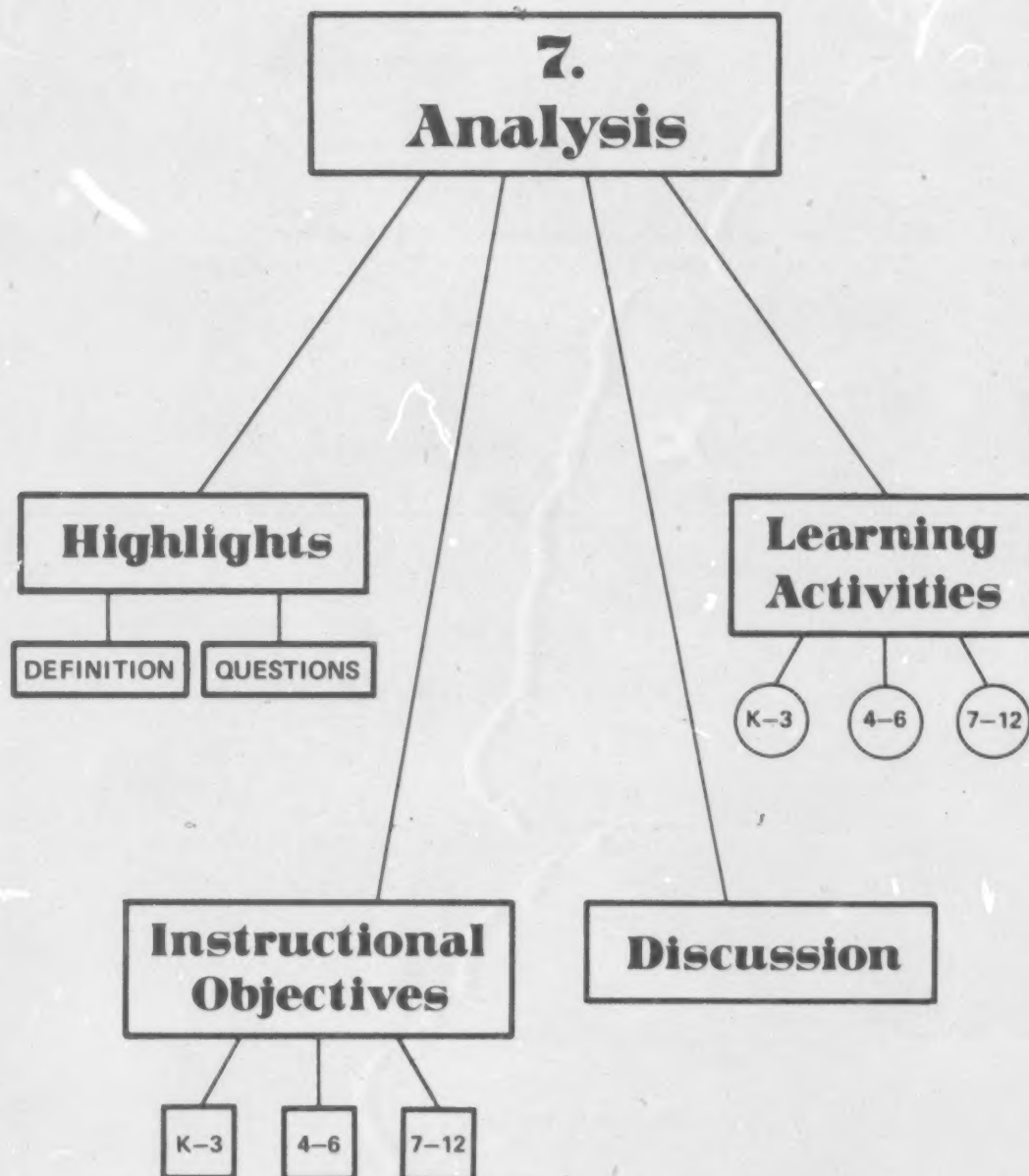
what to take with you
where to travel
what cities to visit
what type of transportation to use
what amusements to pursue

History of the Newspaper: Conduct research, individually and as a group, upon such topics as:

The development of our alphabet
The development of the printing press
How news was carried in colonial America
Great personalities of the newspaper world

FOOTNOTES

1. Henry P. Smith and Emerald V. Dechant, *Psychology in Teaching Reading* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1961), p. 68.
2. Benjamin S. Bloom, J. Thomas Hastings, and George F. Madaus, *Handbook on Formative and Summative Evaluation of Student Learning* (New York: McGraw-Hill Book Co., 1971), p. 159.
3. Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper & Row, Inc., 1966), pp. 75-77.
4. Bloom, et al., *Handbook*, pp. 161-162.
5. Harold L. Herber, *Teaching Reading in Content Areas* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), p. 122.
6. George D. Spache and Evelyn B. Spache, *Reading in the Elementary School* (Boston: Allyn & Bacon, Inc., 1969), p. 477.
7. Clarence W. Sorensen, *Ways of Our Land* (Morristown, N.J.: Silver Burdett, 1959).
8. Sanders, *Classroom Questions*, pp. 87-89.
9. *Ibid.*, p. 89.
10. *Ibid.*, pp. 91-93.
11. *Ibid.*, pp. 80-84.
12. TC, *What Is a Laboratory Practice?* Citizenship Education Project (New York: Teachers College, Columbia University, 1953).
13. TC, *Premises of American Liberty*, Citizenship Education Project (New York: Teachers College, Columbia University, 1952).
14. Sanders, *Classroom Questions*, pp. 85-87.
15. Bloom, et al., *Handbook*, pp. 176-177.
16. MCPS 492 *Ways to Use a Newspaper in the Elementary Classroom*, Bulletin No. 242 (Rockville, Md.: Montgomery County Public Schools, 1970).



7. ANALYSIS

Highlights

7. ANALYZES ORGANIZATIONAL PATTERN OF A COMMUNICATION (PICTURE, SENTENCE, PARAGRAPH, POEM, STORY, REPORT, ARTICLE, CHAPTER, OR BOOK)

- Looking at the whole--
Breaking the whole into parts--
So that the organization of ideas is clear

- Recognizing that both *content* and *form* are important:

What is there?
How is it put together?

- Logically defining the relationships between a whole and its parts

- Verbalizing the organizational scheme

- Reasoning based on logic and scientific method

How does the author develop _____?

How can you tell from this story that the author intended _____?

What does this _____ tell you about the author's _____?
(point of view)
(purpose . . .)

How do you know this is a _____?
(folk tale? biography? ...?)

Could you misinterpret _____?

What techniques has this writer used to influence you?

How are _____ and _____ related?
(the whole) (its parts)

—How are they connected?

—How do they interact?

Instructional Objectives

ANALYSIS

7. ANALYZES ORGANIZATIONAL PATTERN OF A COMMUNICATION (PICTURE, PARAGRAPH, CHAPTER, BOOK, STORY, POEM, REPORT, OR ARTICLE)

a) Analyzes simple narratives or works of literature

- (1) Traces development of a character (or characters)
- (2) Traces development of a plot
- (3) Identifies elements of a particular literary form (comedy, tragedy, romance or adventure, lyric, satire, or hero epic)
- (4) Identifies characteristics of the particular genre (short story, biography, folk tale, poem, novel, play)
- (5) Identifies and explains point of view, tone, or mood
- (6) Relates content, form, genre, plot, setting, characterization, mood, and/or language to author's purpose
- (7) Explains elements that combine to determine author's style
- (8) Explains the set of values implicit in the material

b) Describes techniques used to influence thought and behavior (including propaganda techniques)

c) Traces development of main and supporting ideas

d) Analyzes logic in method of reaching conclusions or generalizations

Suggested Instructional Level

K-3	4-6	7-12
*	*	*
*	*	*
*	*	*
*	*	*
	*	*
	*	*
		*
		*
	*	*
		*
		*

7. ANALYSIS

Discussion

Analysis is based on taking apart a communication so that the relationships of the parts and the organization of the material can be recognized. How does the author develop the characters? Can the student trace the development of the plot? What elements can the student point out which identifies a particular piece of writing as a comedy or as a hero epic?

As students gain skill in Analysis, deeper and fuller understandings result. Ordinarily an author does not point out the principles, the form, or the pattern he has used to organize his materials. However, if the reader were able to think about, discuss, and appreciate the "glue" which holds the material together and makes it a "whole," he should then have a broader understanding of the communication. Can the student describe the author's point of view? Can the student relate the setting to the author's purpose? What elements have been combined which might explain the author's style? This depth in understanding should facilitate the student's ability to evaluate the given piece of writing.

"Potentially, analysis is one of the most important categories of thinking."¹ Sanders cautions, however, that Analysis is an area which is relatively unfamiliar, which is difficult for both teachers and students, but which deserves attention at all grade levels. "Elementary teachers can stress the fact that conclusions must follow evidence. A sixth- or seventh-grade unit on the Soviet Union provides an ideal opportunity to investigate propaganda techniques."² Secondary teachers are offered suggestions for ways of preparing students for Analysis, examples of Analysis questions, and the use of Analysis questions in the classroom.³

The thought processes developed through Analysis are at a sophisticated level of reasoning. The student is helped to verbalize and clarify explicit techniques used in achieving intended effects for varied written materials. Ultimately, the student is helped to become conscious of the intellectual process he is performing and the rules of logic used in reaching valid and true conclusions.

7. ANALYZES ORGANIZATIONAL
PATTERN OF A COMMUNICATION
(PICTURE, PARAGRAPH, CHAPTER,
BOOK, STORY, POEM, REPORT, OR
ARTICLE)

7. ANALYSIS
Organization
4-8

Donald Cushenbery⁴ suggests that every pupil be taught to read certain kinds of printed material with the following questions in mind:

1. Who wrote the material and what are his qualifications?

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

7. ANALYZES ORGANIZATIONAL
PATTERN OF A COMMUNICATION
(PICTURE, PARAGRAPH, CHAPTER,
BOOK, STORY, POEM, REPORT, OR
ARTICLE)

7. ANALYSIS
Organization
4-8

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

7. a) (2) TRACES DEVELOPMENT OF A
PLOT

7. ANALYSIS
Plot
K-12

Among the elements which an author uses to advance the action of the plot are:

- setting
- character development and motivation
- exposition

7. a) (2) *TRACES DEVELOPMENT OF A PLOT*

7. ANALYSIS

Plot
K-12

- initial incident
- starting point of main action
- conflict and/or tension
- rising action
- clues to solution factors creating suspense
- subplots
- foreshadowing
- flashbacks
- dialogue
- climax and/or turning point
- resolution
- denouement and/or surprise ending
- stream of consciousness
- shift in narrator's point of view

These are discussed and developed in the various literature units in the MCPS *English Language Arts Course of Study*, Bulletin No. 185.

7. a) (3) *IDENTIFIES ELEMENTS OF A PARTICULAR LITERARY FORM*

7. ANALYSIS

Literary Form
K-12

Elements of lyric
 narrative
 biography
 romance or adventure
 comedy
 tragedy
 irony
 satire

that determine the form of a work of literature are described in the MCPS *English Language Arts Course of Study*, Bulletin No. 185, on the following pages:

Elementary Level, page DL-11

- books and/or poems about feelings
- books and/or poems which tell stories
- poems which rhyme

7. a) (3) **IDENTIFIES ELEMENTS OF A
PARTICULAR LITERARY
FORM**

- stories about the life of a real person
- stories about imaginary people

Secondary Level, Grades 7-9, page 50

- action
- the light side of life
- man suffering but triumphant
- personal emotion or reflection

Secondary Level, Grades 10-12, pages 50-52

- fear and hate
- social man
- self-respect
- contrast of fantasy and reality
- human foibles
- emotion and reflection

7. a) (4) **IDENTIFIES CHARACTERIS-
TICS OF THE PARTICULAR
GENRE**

7. **ANALYSIS**
Literary Form
K-12

Genres are described in the MCPS *English Language Arts Course of Study*, Bulletin No. 185, on the following pages:

Elementary Level, page DL-14

- short story
- poem
- biography
- play

Secondary Level, Grades 7-9, pages 52-54

- simple narrative
- short story
- novel
- drama

7. a) (4) IDENTIFIES CHARACTERISTICS OF THE PARTICULAR GENRE

- poetry
- essay
- biography

Secondary Level, Grades 10-12, pages 54-57

- prose fiction
- drama
- poetry
- essay
- rhetorical prose
- biography

For teaching suggestions, refer to the various literature units in the courses of study.

7. ANALYSIS
Genre
K-12

7. a) (5) IDENTIFIES AND EXPLAINS POINT OF VIEW, TONE, OR MOOD

7. ANALYSIS
Point of View, Tone, or Mood
4-12

An author's tone may be

formal
informal
intimate
solemn
somber
playful
serious
humorous
ironic
satiric
condescending

See the section on Point of View and Tone and individual literature units in the elementary and secondary MCPS *English Language Arts Course of Study, Literature Program, K-12*, Bulletin No. 185.

Secondary teachers may find useful examples of test problems for Analysis in *Handbook on Formative and Summative Evaluation of Student Learning*, pages 189-191.⁵

7. a) (5) IDENTIFIES AND EXPLAINS
POINT OF VIEW, TONE, OR
MOOD

7. ANALYSIS
Point of View, Tone, or Mood
7-12

Choose a feature article from the newspaper.

- Tell how the writer makes you feel.
- Decide what parts of the article set the mood.
- Find words and sentences that give you these feelings.

7. a) (7) EXPLAINS ELEMENTS THAT
COMBINE TO DETERMINE AU-
THOR'S STYLE

7. ANALYSIS
Author's Style
7-12

Discuss an outstanding columnist whose articles appear in the local paper, such as:

Joseph Alsop
Jack Anderson
S. I. Hayakawa
William Raspberry
Carl Rowan

Consider:

- type of columnist
- title of column
- point of view
- other papers in which the column appears

The above suggestions are taken from MCPS Bulletin No. 242, *492 Ways to Use a Newspaper in the Elementary Classroom*, Grades 1-6, 1970.

Those elements which students might consider in determining an author's style include the use of:

figurative language
sustained metaphor or controlling image
symbol
myth
sense-appealing words
emotion and image-provoking words
pace of action
clarity of writing
rhetorical language
cadence

7. a) (7) **EXPLAINS ELEMENTS THAT
COMBINE TO DETERMINE AU-
THOR'S STYLE**

rhythm and rhyme
parody
understatement
exaggeration
incongruity
individual characteristics of diction and sentence structure
suitability of language to purpose
audience
theme

See the elementary and secondary MCPS *English Language Arts Course of Study, Literature Program*, Bulletin No. 185, for discussion of these elements and for teaching suggestions in the various literature units.

7. b) **DESCRIBES TECHNIQUES USED
TO INFLUENCE THOUGHT AND
BEHAVIOR (INCLUDING PROPAGANDA TECHNIQUES)**

7. **ANALYSIS**
Author's Style
7-12

7. **ANALYSIS**
Influencing Thought and
Behavior (Propaganda)
4-12

Beware of the Ad

Analysis of propaganda techniques could be initiated at a very simple level with the use of advertisements displayed by the teacher on the bulletin board. Discuss the ads with the students. Help them to become aware of the "gimmicks" used by advertisers to sell their products. Encourage them to check manufacturers' ads, store ads, and real estate ads in newspapers, magazines, and brochures, as well as ads on cereal boxes and other containers. Suggest looking for examples of such advertising devices as utilizing the name of a person of fame or prestige; pretense of scientific proof; the claim that a product is "more" or "better" without specifying better than what; an appeal to emotions such as fear and prejudice; and snob appeal. Make a list of clichés, catch phrases, false claims, exaggerations, irrelevant gimmicks. Discuss with the students whether an ad would make them want to buy a certain product and why. Seven propaganda techniques have been identified which include most of the above advertising gimmicks.

1. **Glittering generalities: vague phrases which promise much**

Positive symbols, slogans, and unsupported generalizations are associated with an idea or a person. Student must carefully weigh facts to determine whether the glittering generality has much truth in it.

7. b) *DESCRIBES TECHNIQUES USED TO INFLUENCE THOUGHT AND BEHAVIOR (INCLUDING PROPAGANDA TECHNIQUES)*

7. ANALYSIS
Influencing Thought and Behavior (Propaganda)
4-12

2. Plain folks: a pretense at being one of the folks

This technique includes the use of idiomatic language or folksy mannerisms. It is an attempt to convince the reader or the listener that the writer or the speaker "belongs" to a particular group. The device is often used in politics — example: referring to local people with intimacy or wearing a "hard hat."

3. Bandwagon: everybody's doing it

In the days of the traveling circus, many people and animals chased after the bandwagon, wanting to climb aboard. This is an attempt to persuade people to follow the lead of the majority or to conform.

4. Mud slinging or name calling: attaching a label rather than using facts

A desired reaction may occur if a name having negative connotations is attached to a person, product, or idea.

5. Transfer: attaching strong, positive symbols to an idea or a product

The picture of a famous or respected person may be used in association with an organization whose object is to gain public support through the use of such positive symbols.

6. Testimonial: the endorsement of a prominent person.

If a championship golfer uses and endorses a particular brand of golf balls, the reader might be swayed toward purchasing that particular brand.

7. Stacking the deck or manipulation: arranging figures, facts, or words to suit your own purposes

The writer may (a) tell only his side of the story or may (b) slant material either pro (for) or con (against) in order to win the reader to his point of view.

As students develop awareness of techniques used to influence thought, they can progress to the more difficult task of identifying such techniques in different kinds of reading matter, such as written expressions of opinion, Letters to the Editor, and newspaper accounts of political speeches. The teacher may wish to discuss the following list of techniques for diverting thought (excerpted from the MCPS English Language Arts Course of Study (Elementary Level), Bulletin No. 185, page L-36).

Techniques for Diverting Thought

Introducing objections which are irrelevant

Using contradictory statements and actual misrepresentation of fact

7. b) *DESCRIBES TECHNIQUES USED
TO INFLUENCE THOUGHT AND
BEHAVIOR (INCLUDING PROPAGANDA
TECHNIQUES)*

7. ANALYSIS
Influencing Thought and
Behavior (Propaganda)
4-12

Using a thread of fact of continuity between two things to throw doubt on a real difference

Making a doubtful proposition fit the beliefs or prejudices of the opposition

Removing opposition to a doubtful proposition by a preliminary statement containing a few propositions that might easily be acceptable

Creating a speculative argument by the use of "ought" or "should" instead of adhering to facts

Delaying a solution by rejecting all proposals instead of moving toward a compromise or amendment

Making a dogmatic statement indicating that a conclusion is eminent and that further argument would be useless

7. ANALYSIS
Propaganda Technique
4-8

From *492 Ways to Use a Newspaper in the Elementary Classroom*, MCPS Bulletin No. 242, 1970.

Study news articles. Try to locate "misleading news" statements.

Find examples of:

distortion
ambiguity
appeal to emotions
glaring generalities

Study the advertisements. Look for such propaganda devices as:

"best in the world"
"no other like it"
"all doctors advise . . ."
"just like Mother's"

Study advertisements in regard to unreasonable claims, such as claims for

toothpaste
chewing gum
laxatives
tranquilizers

**7. b) DESCRIBES TECHNIQUES USED
TO INFLUENCE THOUGHT AND
BEHAVIOR (INCLUDING PROPAGANDA
TECHNIQUES)**

7. ANALYSIS
Influencing Thought and
Behavior (Propaganda)
9-12

At the secondary level, in addition to exploring the propaganda techniques described on pages , the teacher may wish the class to consider articles such as "Propaganda Techniques in Institutional Advertising," by Leonard I. Pearlman and Morris Rosenberg,⁶ which explore "an area of advertising which, bordering closely on the sale of ideology, has developed and elaborated distinctively fascinating propaganda techniques."⁷ By analyzing radio commercials of three large corporations during the period 1945 to 1951, the authors distinguish the six propaganda techniques described below, which were utilized not to sell a product but to win the "good will" of the American public.

1. Elaboration of latent consequences — "giving to incidental, accidental, or unavoidable company activity the quality of apparent intention or purpose."⁸ This technique involves three elements: the actor (corporation, industry, capitalist system); the action (making a contribution to, "establishing conditions for," "proving indispensable to") and the beneficiary (individuals, population subgroups, social institutions, American society as a whole).
2. Humanization — creation of a company image which includes personality and intellectual traits which are admired in individuals in the American culture — the institutional advertiser depicts itself as pleasant, friendly, personal, folksy, generous, hard-working, and patriotic; and as being intellectually rational, scientific, ingenious, imaginative, and insightful.
3. Denial and conversion — rejection of characteristics not considered commendable (impersonality, concentration of power, monopoly, excessive profit-seeking) or conversion of "profane" values — or undesirable attributes — into "sacred" values or features perceived as beneficial to society (the undesirable attribute of "bigness" is converted to the desirable attribute of efficiency of large-scale production).
4. Creation of ego-involvement — causing the audience to identify with the company by implying that the fate of the audience is bound up with the fate of the company; that the company's problems are the audience's own problems.
5. Association or status contagion — associating the advertiser with the dominant cultural values (such as family, community spirit, the American way of life).
6. Omission of "profane" or divisive subjects — avoidance of references which might have an effect opposite from the desired one: topics that are potential sources of conflict or of alienation of segments of the population; latent dysfunctions caused by large business operations; anything violating conventional aesthetic standards; or "profane" values such as profit and money-making.

Students could be asked to look for similar types of propaganda techniques in today's periodical and television advertising.

7. c) *TRACES DEVELOPMENT OF
MAIN AND SUPPORTING IDEAS*

7. **ANALYSIS**
Main/Supporting Ideas
7-9

A paragraph may be organized so that the main idea or topic sentence comes first; so that it comes last as a kind of summing up; so that it is stated at the beginning and again at the end; so that it appears in the middle of a paragraph; or so that it is never actually stated but is implied. Given a number of sample paragraphs such as the following illustrating these different arrangements, the student identifies each one as

- a) Main idea stated first, followed by supporting ideas
- b) Supporting ideas stated first, summed up in concluding sentence containing main idea
- c) Main idea stated in first sentence and in different words in last sentence
- d) Main idea stated in middle of paragraphs
- e) Main idea implied but not actually stated

Direction: Decide on how each of the following paragraphs is organized and write the appropriate letter on the line next to it.

_____ Our team played its best game Saturday. Three times Harry opened up a hole for Joe to get through for touchdowns. Mike threw some beautiful passes. We made two touchdowns on passes. Everyone did his job well.

_____ The linemen did their best blocking of the year. Ten of the twelve passes Joe threw were completed. The running backs really took off with the ball when they got it. A total of 254 yards was gained on running. It was the best game we've played so far this year.

_____ What was so special last Saturday? Our team gained 254 yards by rushing as compared with our previous high total of 154 yards. Sixteen of the eighteen passes were completed — the season's highest number. We scored an amazing seven touchdowns, and our kicker made all the extra points. What a game!

_____ Some insects are harmful. They eat plants. They bite man. They make animals sick. They carry dirt and diseases from place to place. Man does not want them around.

_____ Our capital city has white marble buildings and monuments. It has museums and art galleries. Many people visit there in the summer. There are lots of things to see and do. Washington, D.C., is a beautiful, interesting city.

_____ A good citizen of a school helps keep the building clean and neat. He is quiet in the library or when he passes the doors of other classrooms. He is cooperative when he is working with others. He plays fair on the playground. He helps his teacher by giving attention and respect.

7. c) TRACES DEVELOPMENT OF
MAIN AND SUPPORTING IDEAS

7. ANALYSIS
Main/Supporting Ideas
7-9

_____ Snow is bad and beautiful. It makes driving dangerous. It makes walking dangerous. However, the city looks like a fairyland when it snows. Things look clean and white. It is fun to make a snowman. We like snow, and then again, we don't like snow.

_____ We hear a lot about how the Coast Guard rescues people in trouble. But that isn't all the Coast Guard does. One of the main jobs of the Coast Guard is to keep ships and sailors from getting into trouble. The men of the Coast Guard destroy derelicts — old, half-submerged wrecks that could cause other wrecks. Using special ships called cutters, they free ships that have been caught in the ice. With the same cutters, they keep open channels in the frozen harbors of the Great Lakes and northern ports. The ships can continue to carry their cargoes to those ports in winter.

_____ The first automobiles looked like buggies. They were called "horseless carriages." They had dashboards like those in carriages. Some dashboards even had a place for a whip. No one knew what an automobile should look like. After many years, we still aren't sure. Think how automobiles have changed in the last twenty years. What will the cars of twenty years from now look like? Nobody knows.

_____ When Marco Polo was seventeen years old, he went from Italy to China with his father and uncle. While there, he traveled through many little-known parts of the country in the service of the ruler. Many places he visited were very wild, and Marco had some exciting times. Three years after he returned to his homeland, he was called on to serve in a war. He was captured and imprisoned for nearly a year. Marco Polo had many interesting adventures during his life — both in foreign lands and in his homeland.

7. ANALYSIS
Main/Supporting Ideas
7-12

To help students learn to take notes of important points in listening or reading and to relate main points to subordinate ideas, a teacher might prepare a lecture or use a film on a subject the class is studying. The lecture should be carefully organized or the film carefully selected so that the structure of important ideas or main topics and subtopics is very clear. Tell the students that they will be given a quiz the following day on the important points of the lecture; have them take notes on what they consider the important points of the lecture or film, and give them time to organize their notes into an outline. Base the test questions on the lecture. The subject should not be so difficult or unfamiliar that the students would have difficulty following it. At the same time, it should not be so familiar that they would know the test answers without listening to the lecture and taking the notes.

After the test, have the students score their own papers using an answer sheet provided by the teacher. Then have them compare their notes with the teacher's lecture outline or with a teacher-made summary of the content of the film or tape. In individual conferences, teacher and student together

7. c) *TRACES DEVELOPMENT OF
MAIN AND SUPPORTING IDEAS*

7. **ANALYSIS**
Main/Supporting Ideas
7-12

compare teacher's and student's notes; analyze the student's answers to the question; and compare what the teacher's outline and the student's notes both indicate as being important. Students who do not do well in the test might be retested. Let them compare their second paper with the first; and on that basis they can evaluate their progress in note-taking and outlining.

As the student gains facility in taking notes and outlining, the scope of this activity can be expanded and applied to reading of chapters of textbooks.

7. d) *ANALYZES LOGIC IN METHOD
OF REACHING CONCLUSIONS
OR GENERALIZATIONS*

7. **ANALYSIS**
Logic
7-12

For the secondary school teacher who wishes to explore further possibilities of teaching logical thinking to his students in connection with their reading activities, the following bibliography is suggested. Those books with a call number indicated are available in the Educational Materials Laboratory at the Washington Center. The others are recommended by Sanders.⁹

- 160 Black, Max. *Critical Thinking*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1952.
BLA
- Brennan, Joseph Gerard. *A Handbook of Logic*. New York: Harper & Row, Inc., 1961.
- Chase, Stuart. *Guides to Straight Thinking*. New York: Harper & Row, Inc., 1956.
- 160 Dewey, John. *Logic: The Theory of Inquiry*. New York: Henry Holt & Company, 1938.
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- Graves, Harold F., and Oldsey, Bernard S. *From Fact to Judgment*. New York: Macmillan, 1963.
- Hayakawa, S. I. [et al.]. *Language in Thought and Action* [2nd ed.]. New York: Harcourt, Brace [Jovanovich, n.d.]
- 160 Jepson, R.W. *Clear Thinking*. London: Longmans, Green & Co., 1956.
JEP
- Johnson, James William. *Logic and Rhetoric*. New York: Macmillan, 1962.
- Little, Wilson, and Moore, W. Edgar. *Applied Logic*. Boston: Houghton Mifflin, 1955.
- 160 Luce, A. A. *Teach Yourself Logic to Think More Clearly*. New York: Association Press, 1959.
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7. d) ANALYZES LOGIC IN METHOD
OF REACHING CONCLUSIONS
OR GENERALIZATIONS

7. ANALYSIS
Logic
7-12

160 Rescher, Nicholas. *Introduction to Logic*. New York: St. Martin's Press, 1964.

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Ruby, Lionei. *Logic*. Philadelphia: Lippincott, 1960. (Especially recommended by Sanders)

Wekmeister, W. H. *An Introduction to Critical Thinking*. Lincoln, Neb.: Johnson Publishing Company, 1957. (Especially recommended by Sanders)

The following list of examples of Faulty Thinking may be found in the MCPS *English Language Arts Course of Study*, Bulletin No. 185, pages L-34 to L-36.

FAULTY THINKING

Errors in Attitude

Showing bias or prejudice for or against some aspect of the problem
Ignoring cause and effect relationships
Maintaining rigid and dogmatic attitude
Vacillating and rationalizing
Showing undue reverence of the new or novel and/or rigidity in adhering to custom and tradition
Showing undue gullibility
Failing to persevere

Errors in Method

Failing to define problem
Failing to advance hypothesis
Failing to seek advice, examine data, or look for evidence
Failing to consider relationship of data to proposition
Failing to reach or test conclusion

Errors in Interpretation

Using language which is vague, complex, or ambiguous with no attempt at definition
Quoting and interpreting material out of context
Using glittering generalities and words or phrases loaded with connotations of approval or disapproval
Treating abstract terms as concrete
Making unnecessarily fine distinctions
Using jargon, and make false references

Errors in Identifying and Defining the Problem

Failing to analyze the problem and locate specific points of conflict
Failing to recognize pattern of the problem
Producing irrelevant, ridiculous, impracticable hypotheses
Advancing too many hypotheses and some that cannot be tested

7. d) ANALYZES LOGIC IN METHOD
OF REACHING CONCLUSIONS
OR GENERALIZATIONS

7. ANALYSIS
Logic
7-12

Errors in Logic

Inductive

Basing judgments on insufficient or non-representative sampling
Ignoring contradictory instances and giving validity to accidental instances
Imputing that events which follow others are caused by them
Failing to recognize statistical fallacy by employment of different units of measure to make comparisons
Falsely assuming that all variables other than those measured remain constant
Forgetting that statistics are abstract and that they omit qualities which are not selected for attention

Deductive

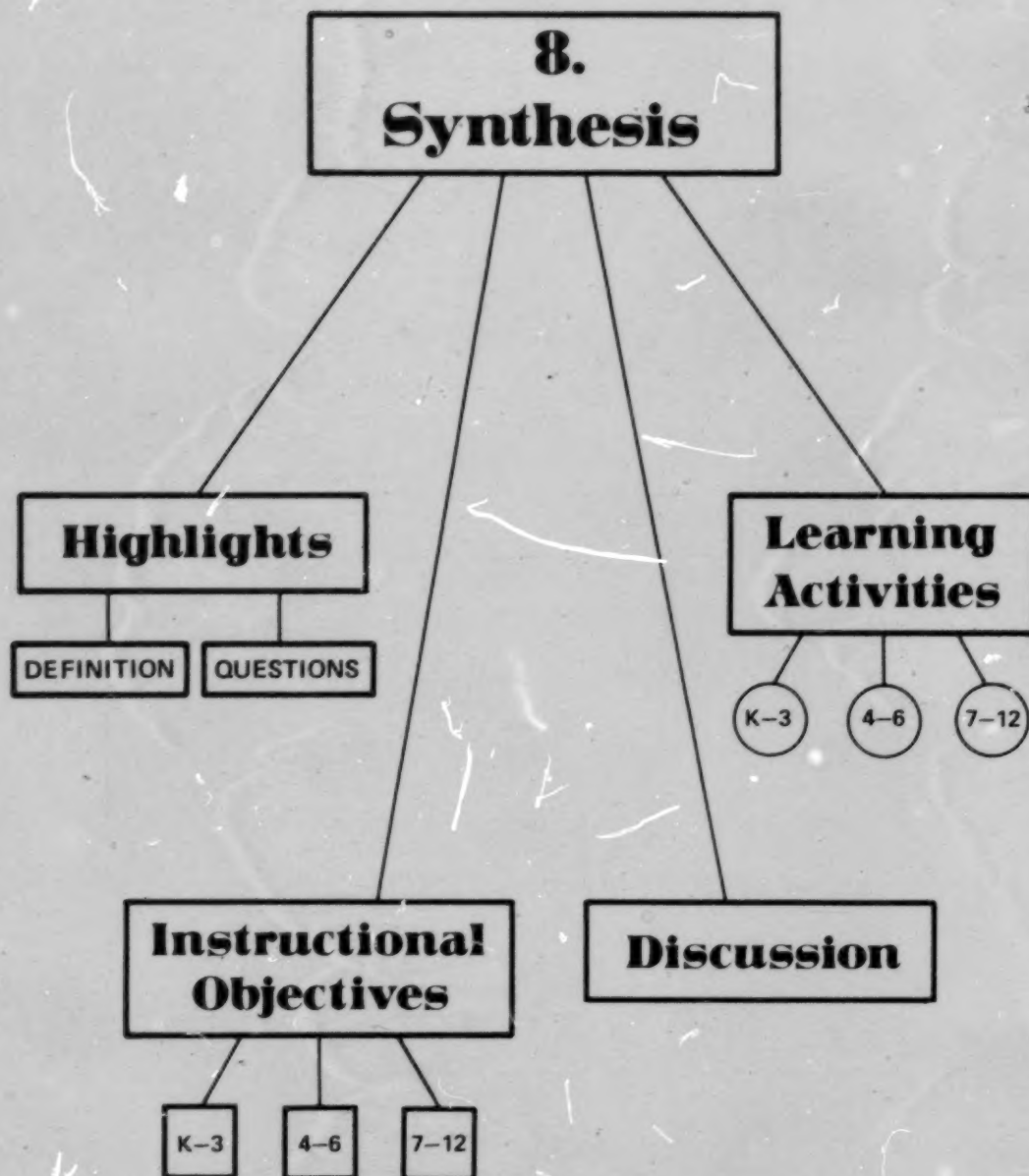
Drawing inferences not justified by the assumptions or generalizations
Assuming that general truths remain valid under all conditions, thereby ignoring exceptions
Assuming a debatable proposition and reasoning in a circle
Asking questions containing implied facts so that a direct answer involves admission of the assumption
Debating a conclusion which is not the original point of issue
Attributing bad motives or prejudices by directing an argument against personal qualities instead of to the issue
Arguing to popular prejudice or employing threats

Errors in Other Processes of Thinking

Rejecting a proposal if there are any objections to it
Supporting an argument by claiming that the opposite cannot be proved
Giving credence to an illogical conclusion
Failing to make explicit the characteristics in which the two factors differ
Using diversionary statements which are not part of the argument

FOOTNOTES

1. Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper & Row, Inc., 1966), p. 120.
2. *Ibid.*
3. *Ibid.*, pp. 110-121.
4. From the book, *Reading Improvement in the Elementary Schools* by Donald C. Cushenbery. © 1969 by Parker Publishing Co., Inc., West Nyack, N.Y. and reprinted with their permission, pp. 96-97.
5. Benjamin S. Bloom, J. Thomas Hastings, and George F. Madaus, *Handbook on Formative and Summative Evaluation of Student Learning* (New York: McGraw-Hill Book Co., 1971).
6. Leonard I. Pearlin and Morris Rosenberg, "Propaganda Techniques in Institutional Advertising," *Public Opinion and Propaganda*, edited by Daniel Katz and others (New York: Holt, Rinehart and Winston, Inc., 1954), pp. 478-490.
7. *Ibid.*, p. 478.
8. *Ibid.*
9. Sanders, *Classroom Questions*, p. 121.



8. SYNTHESIS
Highlights

8. SYNTHESIZES, INTO A NEW FORM OF EXPRESSION, IDEAS SELECTED FROM COMMUNICATIONS

- Combining ideas from many different sources
- Student working with parts – putting them together to form a NEW whole
- Each student creating a unique product
- Emphasizing imaginative – original – creative thinking
- Encouraging a questioning mind
- Encouraging freedom of expression

- *Divergent thinking used.*

What might happen if _____?

How can you solve _____?

In what ways could you improve _____?

What other _____ (titles, endings, solutions, plans)
can you think of?

What different ways might you _____?

What if _____?

In what ways could you use _____ to make _____?

Instructional Objectives

SYNTHESIS

8. SYNTHESIZES, INTO A NEW FORM OF EXPRESSION, IDEAS SELECTED FROM COMMUNICATIONS

Suggested Instructional Level

- a) Combines ideas of others with own ideas
 - (1) To please self and/or others (expression for its own sake)
 - (2) To give information
 - (3) To communicate an opinion or point of view
 - (4) To achieve an effect or response in an audience
 - (a) To persuade to accept an idea or opinion
 - (b) To motivate to carry out a course of action
 - (c) To change attitudes or beliefs
 - (d) To create a mood or feeling
- b) Formulates appropriate hypotheses from analysis of a problem
- c) Proposes ways of testing hypotheses
- d) Integrates the results of an investigation into a solution of a problem

K-3	4-6	7-12
*	*	*
*	*	*
	*	*
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8. SYNTHESIS

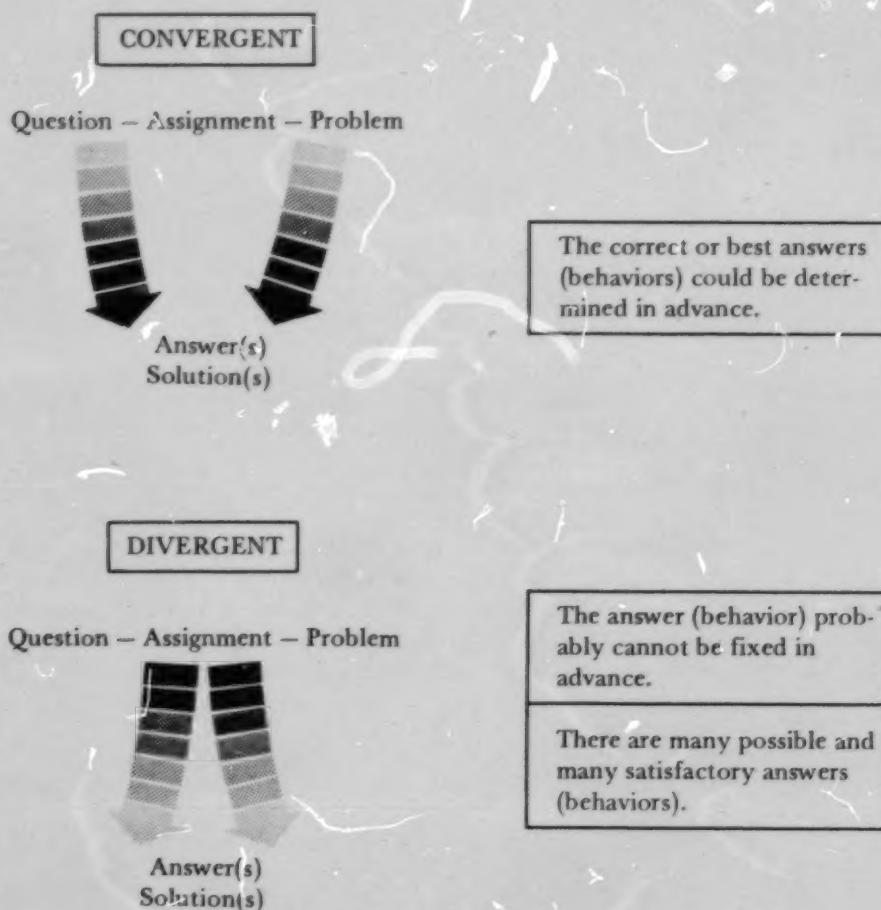
Discussion

This category refers to creative thinking on the part of the learner. Synthesis utilizes all of the previously listed categories of cognitive behaviors but differs from them in that it emphasizes completeness, uniqueness, and originality. Also, the previous categories involve working with a given whole — a set of materials or elements which is studied — whereas in synthesis, the student draws upon elements from many sources and puts them together into a whole which was not there before, which is more than the elements he began with, and which can be observed through one or more of the senses.

Three different kinds of synthesis behaviors are defined by Bloom.¹ These are distinguished primarily by the nature of the product involved: production of a unique communication, production of a plan or a proposed set of operations, and derivation of a set of abstract relations.

1. Produces a unique communication

The previous categories in the Taxonomy have dealt for the most part with convergent thinking (in which the correct or best answer may be determined by the nature of the subject matter or the problem). Synthesis appears to be divergent thinking in that one correct response cannot be fixed in advance and each student may provide a unique response to the reading experience.



8. SYNTHESIS

Discussion

Divergent responses are sometimes classified as "creative reading." For the most part, they are speaking and writing behaviors. Detailed listing of such behaviors and specific activities for encouraging them in students, both at elementary and secondary school levels, may be found in some of the following MCPS documents:

English Language Arts Course of Study (Elementary Level) - Literature, Composition and Language, 1965, Bulletin No. 185.

English Language Arts Course of Study (Secondary Level - Grades 7-9) - Literature, Composition and Language, 1966, Bulletin No. 185.

English Language Arts Course of Study (Secondary Level - Grades 10-12) - Literature, Composition and Language, 1966, Bulletin No. 185.

Writing in the Elementary School, 1964, Bulletin No. 180.

... And All This IS Reading, Primary Reading Handbook, 1967, Bulletin No. 202.

Language Arts Mini-Report No. 8, January, 1971.

SPEAKING SKILLS Scope-Sequence Chart, with Desired Behavioral Outcomes and Suggested Activities, Grades K-12, 1971.

2. Produces a plan or proposed set of operations which satisfies the requirements of a task

At this second level of synthesis behavior, the plan or set of operations formulated by the student must satisfy the requirements of a task. The requirements are laid down in the form of specifications or data either given to the student or worked out by him, and thus they furnish the criteria against which the product is evaluated. Following are two examples of this kind of synthesis behavior.

- a) Proposes ways of testing hypotheses
- b) Integrates the results of an investigation into an effective plan or solution to solve a problem

3. Derives a set of abstract relations

This third and most advanced subcategory deals with the attempt to derive abstract relations from a detailed analysis. The relations are not explicit from the start but must be discovered or deduced by the student. An example would be the development of the taxonomies for classifying plants and animals, according to their fundamental properties. The student operates within some theoretical framework, and his product must meet rigorous objective criteria.

8. SYNTHESIS

Discussion

Although a problem and the student's solution need not be new nor original to the field involved, they must be new to the student. Otherwise the student is just remembering a previously-learned synthesis rather than creating an original solution. On occasion, the student may be the one who creates the problem. An open-book examination could also be an example of a synthesis problem.²

Not every assignment which asks a student to produce "something" is in the Synthesis category. For example, writing a paragraph may require only Recall (category 2). Drawing a picture may be Translation (category 3). True Synthesis activities require creativity and freedom of expression. Synthesis is encouraged in a classroom atmosphere which supports divergent thinking.

Synthesis questions and assignments are difficult to evaluate. Suggestions for devising Synthesis problems and for evaluating student products may be found in Chapter 9 of *Formative and Summative Evaluation*.³ These suggestions include:

Evaluation of student's work on synthesis tasks:

1. Evaluate the process used to get the answer or the product.
2. Evaluate the quality of the product.
3. Evaluate the quality of the evidence and arguments supporting the answer or product.

Ideally, evaluation of synthesis tasks are:

1. Not on pass-fail basis
2. Not on letter grades
3. Directed at helping student see what is good about his answer or his product and what should be improved

Student's evaluation of synthesis tasks include:

1. Is there a pride of authorship?
2. Is there a sense of creativity?
3. Is there a sense of communication?
4. Is there a sense of relevance?⁴

"Synthesis objectives occur at most levels of education. Some goals, such as 'skill in writing' and 'ability to formulate hypotheses,' are as appropriate at the elementary school level as at the Ph.D."⁵ Bloom points out, too, that Synthesis assignments are motivating and challenging; they provide opportunity for problem solving, relating ideas, and generalizing; they encourage the independent thinking essential to a democratic society.⁶

8. a) (1) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO PLEASE
SELF AND OTHERS**

8. **SYNTHESIS**
Literature
K-4

A book such as *I Can't Said the Ant!*⁷ is read to the class. The students are instructed to listen for the form of the story. This form may suggest ways in which the students can extend the story using their own ideas. These books can also be used: *If It Weren't for You*,⁸ *Millions and Millions and Millions*,⁹ *Alligators All Around*,¹⁰ *Hailstones and Halibut Bones*,¹¹ *A Hole is to Dig*.¹²

8. **SYNTHESIS**
The Newspaper
K-6

The following ideas, as well as other suggestions titled "The Newspaper" in this section, are excerpts from *492 Ways to Use a Newspaper in the Elementary Classroom*.¹³

- Plan an anecdote or joke period. Clip and compile several jokes and/or anecdotes to share with the class. Make similar original jokes.
- Relate the activities in newspaper photographs and pictures with your personal experiences. These may be dictated to the teacher for experience stories.

A picture of a puppy – reminds you of your dog
A picture of a new house – reminds you of when you moved
A picture of an airplane – reminds you of your trip

- Choose new names for comic strip characters. Could Peanuts be called Shorty? If Henry talked, what would he say? Draw and write the strips.
- Use familiar material. Practice writing headlines in newspaper style. Choose nursery rhymes. Headlines might be as follows:

Rhyme

Old Mother Hubbard
Old Woman in the Shoe
Little Jack Horner

Headline

Family Is Starving
Housing Conditions Very Bad
A Surprise Pie

- Use the column "Lost and Found." Write a story of what happened to the lost kitten. Did she find a good home? What places did she explore? What people did she meet?
- Plan a weekend assignment. Bring in evidence of having read the news of the weekend. Bring a quick quiz on news. The quiz may be completion or multiple choice items on a news article. You may bring a summary paragraph on some bit of news. You may bring a letter written to someone in the news.

8. a) (1) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO PLEASE
SELF AND OTHERS**

8. **SYNTHESIS**
The Newspaper
K-6

- Choose a story familiar to your group. Use the material from the story to
 - develop the sequence of events into a comic strip
 - develop the events into a news item
 - develop a feature story of a character
 - develop advertisements about items mentioned in the story
 - develop an editorial concerning the behavior of a character
- Post headlines from the paper. Write leads for the stories suggested.
- Practice writing different headlines for news items.

8. **SYNTHESIS**
The Newspaper
4-8

Social Studies

- Select a community problem to study for a period of time. Use all parts of the paper — news, letters to the editor, editorials, and others. Give a summary of the development of the problem. Show how the articles grew longer or shorter; how the story moved on or off page one. Make a bulletin board or scrapbook of the clippings.
- Paste clippings on wrapping paper each week to make a four-page paper for the week.
- Learn of the lives of the men who have been outstanding in the newspaper world, such as Peter Zenger or Joseph Pulitzer. Present your information in the form of a book report, a dramatization, or a mock interview.
- Make an historical newspaper. Gather data concerning a period of history under consideration. Present the material in modern newspaper form. Assume that the class is studying the Revolutionary period of American history. Plans for a paper might be as follows:

News items	—	British Defeated at Saratoga Plans of American forces Casualties of Americans
Feature articles	—	Life at Valley Forge A Target-Range Practice A Word of Encouragement from the General
Editorials	—	What the Saratoga Victory Means to Us

8. a) (1) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO PLEASE
SELF AND OTHERS**

Cartoons — A Surprised Englishman

Advertisements — Parchment, Leather, [Boots]

8. **SYNTHESIS**
The Newspaper
4-8

8. a) (2) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO GIVE IN-
FORMATION**

8. **SYNTHESIS**
Information
K-6

Extending Imaginations

Introduce an ordinary object to the students. (This may be a can, box, piece of rope, etc.)

Ask the students to think of possible ways the object might be used.

- Encourage all kinds of responses — the routine, practical, ordinary uses as well as contributions that are different or unusual.
- A class chart could be made that lists both mundane and creative uses of the object.
- Pictures might be drawn to illustrate some of the ideas.

8. **SYNTHESIS**
Information
4-6

A unit of study on the United States might present opportunity for each student to produce something of his own choosing. The student's choices might include:

Select one state of the fifty for intensive study
Collect information and materials for a report or booklet
Factual information collected might cover:

Geographic features
Population
Size
Capital
Economy
People contributing to development

8. a) (2) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO GIVE IN-
FORMATION**

8. **SYNTHESIS**
Information
4-6

Students might

- share resources
- read both fiction and non-fiction
- draw maps, graphs, and illustrations
- include newspaper and magazine clippings
- make booklet in shape of state

Other areas of concentration might be:

Cities in the United States
Cities in other countries
Nations of the world
Continents

8. **SYNTHESIS**
The Newspaper
4-8

Art

Keep an art bulletin board. Use such topics as:

Announcements of art displays
Art in the news — a story such as an announcement of a current exhibition at the National Gallery
Reproduction of famous art works
Feature story of an artist
Printing styles exhibited in newspaper banners

- Display materials which appear in the newspaper at special seasons of the year such as:

Holiday cards
Holiday doorway decorations
Easter egg decorations
Fall harvest
Winter scenes
Spring flowers

- Using cutouts from ads, make a layout for an ad of your own. Consider:

- attention arouser
- good balance
- pleasing colors

8. a) (2) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO GIVE IN-
FORMATION**

8. **SYNTHESIS**
The Newspaper
4-8

Science

- Use newspaper articles to compile lists of outstanding scientists and their achievements.
Organize into a modern "Who's Who in Science."
- Make a bulletin board of people who have contributed to various scientific discoveries.
- Make a scrapbook of articles written about people who have won the Nobel Prize because of their contribution to science.

8. a) (2) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO GIVE IN-
FORMATION**

8. **SYNTHESIS**
Information/Point of View
3

8. a) (3) **TO COMMUNICATE AN OPIN-
ION OR POINT OF VIEW**

The following activities, illustrations of synthesizing, are from *MCPS Elementary Social Studies Illustrative Units, Volume 1, K-3*, Bulletin 175, 1971:

Grade 3: "Living in Hot-Wet Regions: A Tropical African Village"

8.a)(2) To give information

(p. 123) Write a diary of an imaginary trip to a Congo village.

Dramatize scenes showing the relationship between the natives and traders.

(p. 125) Write stories of imaginary hunting or fishing trips in the Congo Basin.

(p. 126) Dramatize imaginary conversations between children in our country and children of the Congo, to compare the work of the family members.

(p. 127) Plan skits to show scenes from a school in the Congo village.

Pretend to be a native child from the jungle. Write a story to tell how one would travel to the city.

8. a) (2) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO GIVE IN-
FORMATION**

8. a) (3) **TO COMMUNICATE AN OPIN-
ION OR POINT OF VIEW**

8. **SYNTHESIS**
Information/Point of View
3

8.a)(3) To communicate a point of view

(p. 128) Discuss what you would do if you had to live in a Congo village and give up your own way of life. How would you adapt yourself to the [new] environment?

8. a) (3) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO COM-
MUNICATE A POINT OF VIEW**

8. **SYNTHESIS**
Point of View
4-8

Source: *492 Ways to Use a Newspaper in the Elementary Classroom*.¹⁴

Hold a "Meet the Press" type interview with an author [whom your classmates are familiar with] . . . The group is responsible for knowing some of the details of the author's life. . . . [The] group prepares questions to ask the author. [One] student [is] chosen as the [author and] answers the questions. Thus if the group [had] read *Charlotte's Web* and were interviewing E. B. White, such questions [as these] might be asked:

1. Do you think any of Charlotte's children learned to know Wilbur?
2. Did you ever live on a farm?
3. If you lived on a farm, what part of the country did you live in?
4. Have you ever taken part in a 4-H program about pigs?
5. Do you have any children of your own?
6. Do you plan any more stories about Wilbur?

8. **SYNTHESIS**
The Newspaper
4-8

- Use the "For Sale" column. Write a story explaining why a certain item is being sold. An ad such as the following might elicit many stories:

For Sale: Bridal gown, size 12, never worn.

- Bring to class an interesting item in the "Lost and Found" column. Read it to the class. Then tell a story about the person you think might have lost the article.

8. a) (3) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO COM-
MUNICATE A POINT OF VIEW**

8. **SYNTHESIS**
The Newspaper
4-8

- Underline the quotations in an article. Discuss how they enliven the article. Write your own quotations. What might the character in the news have said in a certain situation?
- Organize a "school problem" newsletter. Each of your classmates may choose a school situation wherein he wishes to express his opinion. These "problems" may be very simple, such as "Why do we need Service Club representatives on the stairways?" or "Should we choose new room helpers each week?" Give individual opinions in a letter to the editor.

Social Studies

- Plan a tour of your city through newspaper clippings. Be a Chamber of Commerce representative and direct tourists around your city. With the aid of clippings, show:

places of historical interest
educational institutions
beautiful homes

government buildings
parks and recreational facilities
business and industrial areas

- [Assume the role of someone who lived in] the past. Write a news item from your point of view. Pretend to be—

- a reporter during the Civil War
- a pioneer of the midwest
- a messenger runner during a battle in ancient Greece
- a letter writer for a ruler of ancient Egypt

8. **SYNTHESIS**
Point of View
6

Have the students read *Follow the Leader* — (MCPS English Language Arts Bulletin,¹⁵ Sample Unit, p. V-25), and ask the following questions (listed in the sample lesson):

"Imagine you are Mike, Chuck or Jimmy's sister. How would you react to seeing Jimmy for the first time?"

"What other everyday situations besides eating and finding clothes would cause difficult adjustment to a new place if you were blind?"

Blindfold a student and have him pretend he is Jimmy. Have him describe his thoughts about adjusting to attending school or going to a baseball game or for a walk.

8. a) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS*

(2) *TO GIVE INFORMATION*

(3) *TO COMMUNICATE AN OPINION
OR POINT OF VIEW*

8. a) (4) *(a) TO PERSUADE TO ACCEPT
AN IDEA OR OPINION*

8. **SYNTHESIS**

Information/Opinion

4-5

The following activities, illustrations of synthesizing, are from *MCPS Elementary Social Studies Illustrative Units, Volume II, 4-6, 1972*:¹⁶

Grade 4: "Across the Ocean to the New Lands"

8.a)(2) To give information

(p. 4) Imagine that you have joined a caravan on its way from the Spice Island to Genoa. Write a story telling of the adventures as well as the hardships and dangers of the journey.

(p. 5) Organize a "What's My Line" panel. Individuals take the part of one of the famous people studied in this unit. The entire class may act as the panel.

Grade 5: "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

8.a)(4)(a) To persuade to accept an opinion

(p. 99) Prepare an advertisement, a travel poster, or a "selling" talk that a travel agency might use to attract tourists to Alaska.

8.a)(3) To communicate an opinion

(p. 100) Have a panel discussion of Alaska's future in the light of its economy and importance to the United States. Opinions should be formed on the basis of facts. Have students complete and judge responses to "I would like to live in Alaska because . . ." and similar sentences.

8. a) (4) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO ACHIEVE
AN EFFECT OR RESPONSE IN
AN AUDIENCE*

8. **SYNTHESIS**

Audience Response

K-6

Stories and books provide many opportunities for originality as students share with each other. The effect on the audience or the response of the audience would often depend on the kind of presentation made.

8. a) (4) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO ACHIEVE
AN EFFECT OR RESPONSE IN
AN AUDIENCE*

8. **SYNTHESIS**
Audience Response
K-6

Ways to Share a Book

1. Tell or write about the most exciting or interesting part of the book.
2. Write a summary in verse (poetry).
3. How can you tell the sequence of events in the story in an unusual way?
4. Present part of the story in a play.
5. Give a vivid oral or written description of a character.
6. Make up questions for other students reading the same book.
7. Give a chalk talk to develop the story.

From the Newspaper

1. Select an advertisement.
2. Write a slogan for it. Try writing another slogan with a different slant.
3. Draw a picture for each of the slogans.
 - a) One may be a picture of a summer drink captioned "As Refreshing as a Summer Cruise" with a picture of a river steamer.
 - b) The other might be "As Refreshing as a Mountain Stream" with a picture of the stream.

8. a) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS*

8. a) (4)(b) *TO MOTIVATE TO CARRY
OUT A COURSE OF ACTION
(d) TO CREATE A MOOD OR
FEELING*

8. **SYNTHESIS**
Motivation/Mood or Feeling
6

The following activities, illustrations of synthesizing, are from *MCPS Elementary Social Studies Illustrative Units, Volume II, 4-6, 1972*:¹⁷

Grade 6: "Feudalism Preserves Western Culture"

- 8.a)(4)(b) To motivate to carry out a course of action

(p. 136) Hold a class discussion to decide which crusade you will join. Have students from different groups, on basis of decision, compile information about specific crusade selected.

8. a) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS*
8. a) (4)(b) *TO MOTIVATE TO CARRY
OUT A COURSE OF ACTION*
(d) *TO CREATE A MOOD OR
FEELING*

8. **SYNTHESIS**
Motivation/Mood or Feeling
6

8.a)(4)(d) *To create a mood or feeling*

(p. 137) Dramatize the arrival home of a group of pilgrims [from a crusade]. The townspeople gather to hear of the exciting events and to see the treasures you have brought back. Show products and tell about tapestries, rich brocades, silks, spices, jewels, windmills, medicines, new plans. Describe a dramatic event such as an attack by a group of bandits or the closing of the city gates. Reflect the feeling of the times in a discussion of attack on Constantinople.

8. a) (4) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO ACHIEVE
AN EFFECT OR RESPONSE IN
AN AUDIENCE*

8. **SYNTHESIS**
Audience Response
4-6

A variety of media may be used to express the important ideas learned in social studies. The elementary social studies Illustrative Units offer many suggestions for activities in which students can synthesize in a creative way what they have learned. In helping them to make decisions concerning such projects, the teacher will help them become aware that certain ideas may be expressed better in some media than others, and that some media are more appropriate for synthesizing certain kinds of learning than others. Some examples of different kinds of creative activities which students may choose to synthesize their learning are:

Grade 5: "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

- (p. 90) Learn and participate in some native Hawaiian dances.
- (p. 90) Plan a re-enactment of one of the native festivals.
- (p. 92) Plan and develop a series of posters to show Hawaii's tourist attractions.

Grade 6: "Feudalism Preserves Western Culture"

- (p. 135) Make a bulletin board display showing the ways in which the Church helped medieval man (e.g., education, agriculture, medicine, protection, right of sanctuary, aid for travelers, justice, aid to poor).
- (p. 135) Write a diary describing a day in the life of a monk.

8. a) (4) **COMBINES IDEAS OF OTHERS
WITH OWN IDEAS TO ACHIEVE
AN EFFECT OR RESPONSE IN
AN AUDIENCE**

8. **SYNTHESIS**
Audience Response
4-6

(p. 136) Compose lyrics and music for a song that you might sing while traveling.

(p. 137) Have a noble, monk, or merchant tell about the results of the Crusades.

Source: *492 Ways to Use a Newspaper in the Elementary Classroom*.¹⁴

Plan a "modern drama" with the use of puppets. Puppets portray a historical character. The character visits modern America. Such a situation might be

Benjamin Franklin Visits a Modern Industrial Plant

In the action, Franklin views the production of an electric stove. He reminisces about his first stove and his "kite flying."

The Wright Brothers View the Launching of a Space Flight

As they watch the blastoff, the Wright brothers review their own first flight [at Kitty Hawk].

8. b) **FORMULATES APPROPRIATE
HYPOTHESES FROM ANALYSIS
OF A PROBLEM**

8. **SYNTHESIS**
Hypotheses
4-6

Science Center

Elementary students use many different kinds of sources to make discoveries every day. An area in the classroom might be set aside with various objects and instruments for students to use as they make these discoveries. Books, pamphlets, magazines, filmstrips . . . would be included.

1. Records of discoveries could be kept.
2. Forms titled appropriately could be available to record observations and ideas about globes, plants, magnets, levers, student-made experiments . . .
3. Teachers could stimulate discussion with such questions as:
 - How do you know it's a _____?
 - What could you tell us just from observing it?
 - What other senses besides sight could you appeal to in telling us about it?
 - What do you already know about it?
 - Where could you learn more about it?

8. b) *FORMULATES APPROPRIATE
HYPOTHESES FROM ANALYSIS
OF A PROBLEM*

8. **SYNTHESIS**
Hypotheses
7-12

This important aspect of the problem-solving process might be considered:

Provide instruction on the nature and function of hypotheses.

Science teachers would be well equipped to serve as a faculty resource.

Provide opportunity for skill in developing hypotheses.

Situation: _____

What hypotheses can you suggest that would explain this situation?

Suggested hypotheses: _____

Which of the above hypotheses would seem appropriate?

8. a) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS*

8. d) *INTEGRATES THE RESULTS OF
AN INVESTIGATION INTO A SO-
LUTION OF A PROBLEM*

8. **SYNTHESIS**
Combination of Ideas
7-12

Suggestions for subjects which would offer opportunity for originality:

I. Local news and history

- A. Information from newspapers
- B. Information from local people

II. Current problems — solution not yet found
 — solution controversial

Student can examine all aspects and give his personal conclusion.

- A. Current mode of dress
- B. Current life styles
- C. Environment
- D. Transportation

8. a) *COMBINES IDEAS OF OTHERS
WITH OWN IDEAS*

8. d) *INTEGRATES THE RESULTS OF
AN INVESTIGATION INTO A SO-
LUTION OF A PROBLEM*

8. SYNTHESIS

Combination of Ideas

7-12

III. Relating a general problem to a school situation

A. Can our school cafeteria "make ends meet"?

B. Does Montgomery College meet the needs of local high school graduates?

IV. Predictions and recommendations on incomplete story in current news

A. The future of Washington Metropolitan Area Metro System

B. Resolution of the question of private or public ownership of documents produced during the years of public service

Further ideas to stimulate this skill of Synthesis may be found in Sanders, *Classroom Questions, What Kinds?*¹⁹

8. d) **INTEGRATES THE RESULTS OF
AN INVESTIGATION INTO A SO-
LUTION OF A PROBLEM**

8. **SYNTHESIS**
Solution of Problem
7-12

Source: *Thinking Box*²⁰

PROBLEM SOLVING

MUSIC-ART
27
ACTIVITY



Suppose you wanted to set up an art studio where you could work after school. How would you go about doing it?

- 1) You will need to think of where you can put your studio and what you will need in it. What other problems might you have? List them.
- 2) How would you go about solving these problems you have listed?

Artist, George Rohrer

PROBLEM SOLVING

MUSIC-ART
27
ANALYSIS

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Identify the assumptions you made when solving this problem. How could you test your assumptions? What conclusions could you make? After solving the problem, how could you apply the knowledge you have gained?

8. d) **INTEGRATES THE RESULTS OF
AN INVESTIGATION INTO A SO-
LUTION OF A PROBLEM**

8. **SYNTHESIS**
Solution of Problem
7-12

Source: *Thinking Box*²¹

HYPOTHESIZING



National Education Association

Violence has become a major problem in the United States.
List several hypotheses that might explain the rise of violence in this country.



United Press International

RECREATION
20
Activities

HYPOTHESIZING

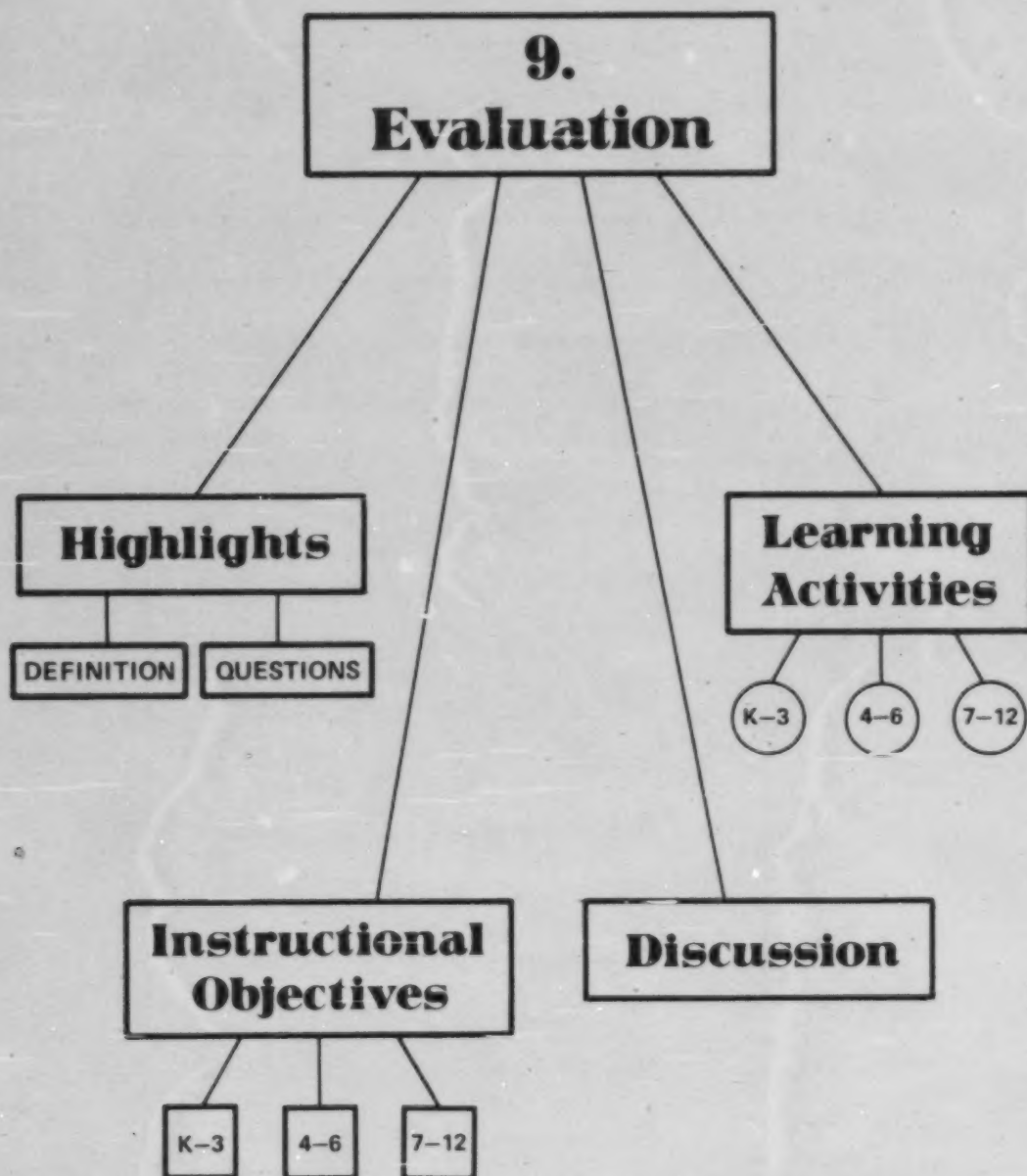
RECREATION
20
Analysis

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In your list of hypotheses, is there one that you might test? Explain how you would go about getting some data to support it.

FOOTNOTES

1. Benjamin S. Bloom (ed.), *Taxonomy of Educational Objectives – The Classification of Educational Goals – Handbook I: Cognitive Domain* (New York: David McKay Co., Inc., 1956), pp. 168-172.
2. Benjamin S. Bloom, J. Thomas Hastings, and George F. Madaus, *Handbook on Formative and Summative Evaluation of Student Learning* (New York: McGraw-Hill Book Co., 1971), p. 196.
3. *Ibid.*, Chapter 9.
4. *Ibid.*, p. 194.
5. Bloom, *Taxonomy*, p. 168.
6. *Ibid.*, pp. 166-168.
7. Polly Cameron, *I Can't Said the Ant* (New York: Coward, McCann and Geoghegan, 1961).
8. Charlotte Zolotow, *If It Weren't for You* (New York: Harper and Row, 1966).
9. Louis Slobodkin, *Millions and Millions and Millions* (New York: Vanguard, 1955).
10. Maurice Sendak, *Alligators All Around*, Nutshell Library (New York: Harper & Row, 1962).
11. Mary O'Neill, *Hailstones and Halibut Bones* (New York: Doubleday, 1961).
12. Ruth Krauss, *A Hole is to Dig* (New York: Harper & Row, 1952).
13. MCPS, *492 Ways to Use a Newspaper in the Elementary Classroom*, Bulletin No. 242 (Rockville, Md.: Montgomery County Public Schools, 1970).
14. *Ibid.*
15. MCPS, *English Language Arts Course of Study*, Bulletin No. 185 (Rockville, Md.: Montgomery County Public Schools, rev. 1972), p. VI-25.
16. MCPS, *Elementary Social Studies Illustrative Units, Vol. II, Gr. 4-6*, Bulletin No. 175 (Rockville, Md.: Montgomery County Public Schools, 1972).
17. *Ibid.*
18. MCPS, *492 Ways*.
19. Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper & Row, Inc., 1966), pp. 129-136.
20. Selma Wasserman, Jack Wasserman, and Louis E. Rath, *The Thinking Skills, Thinking Box* (Westchester, Ill.: Benefic Press, 1969).
21. *Ibid.*



9. EVALUATION
Highlights

9. EVALUATES COMMUNICATIONS

- Making judgments

- Stating and using *one's own* (subjective) standards or values
- Using established standards or values
- Setting objective standards and then using them
- Forming opinions after considering different points of view

Do you agree _____?

Do you feel that _____?

Is _____ fair?

Is _____ better than _____?

Which idea is _____?

Which experiment is _____?

Is _____ effective?

Is _____ appropriate?

How does _____ convince you?

How did you convince _____?

Is _____ a good solution?

Is _____ a better solution?

Is _____ the best solution?

Instructional Objectives

EVALUATION

9. EVALUATES COMMUNICATIONS

Suggested Instructional Level

	K-3	4-6	7-12
a) Articulates own subjective values, opinions, or purposes and uses them as criteria for making judgments	*	*	*
b) Uses established standards as criteria for making judgments			
(1) Uses criterion of accuracy	*	*	*
(2) Uses criterion of consistency		*	*
(3) Uses criterion of adequacy of data		*	*
(4) Uses criterion of clarity		*	*
(5) Uses criterion of relevancy (suitable? appropriate? timely?)		*	*
(6) Uses criterion of validity (justifiable? sound? supported by objective truth?)			*
c) Uses standards of appropriateness and effectiveness for judging literature			
(1) Evaluates use of a particular form or genre			*
(2) Evaluates plot structure, development, or resolution			*
(3) Evaluates setting			*
(4) Evaluates character delineation, motivation, or development			*
(5) Evaluates point of view or tone (mood)			*
(6) Evaluates author's style			*
(7) Evaluates literary language and/or illustrations		*	*
d) Evaluates effectiveness of communications used to influence opinion			
(1) Judges effectiveness of advertising techniques			*
(2) Judges effectiveness of editorial techniques			*
(3) Judges effectiveness of political techniques			*
e) Independently establishes objective criteria for evaluating ideas and uses them			*

9. EVALUATION

Discussion

Evaluation covers judgments made about ideas, communications, methods, materials, or solutions. Evaluation involves some combination of all the previous "Big 9" behaviors (Word Meanings, Location/Recall, Translation, Interpretation, Prediction, Application, Analysis, and Synthesis). While Evaluation can be treated as cognitive behavior, it represents a strong link with such affective behaviors as valuing and enjoying. Evaluation is not necessarily the last step in thinking or problem solving, since it may be intricately woven into all of the other categories and it may lead to further interpretation, application, analysis, or synthesis.

Sanders¹ notes that the setting up of standards or criteria by the student is an essential step in Evaluation. Bloom² states, however, that the criteria or standards used for evaluating may be either determined by the reader or established by someone else and given to him. Bloom also points out that in judging an object, idea, or work, an individual tends to be highly egocentric, using criteria such as usefulness to himself (without reference to its possible utility to others); familiarity; lack of threat to self; status considerations; and ease of comprehension. Also, evaluations commonly tend to be quick decisions rather than being based upon careful consideration of various aspects of what is being judged, made at less than a fully conscious level, and without full awareness of the bases on which judgment is being made. Bloom contends that if the person uses faulty criteria or does not understand the nature and appropriateness of his criteria, he may make faulty judgments.

It seems appropriate that, for instructional purposes, Evaluation can be defined and described at two levels of sophistication, subjective and objective. Skill 9.a) defines a *subjective* level of Evaluation as one which can be described as a simpler kind of quick judgment. This subjective, personal level can and should be used by students at early levels, certainly even in kindergarten. The student responds according to the way the communication makes him feel. He will like or dislike the stories he hears or reads. Skill in subjective kinds of judgments continues to develop as the student reacts to literature and is affected by it. The student may be either moved, or, conversely, completely turned off by the literature. Emphasis in subjective evaluation is on expressive or creative reaction to the communication. *Objective* evaluation is defined by Skills 9.b) through 9.e). This objective level requires the use of explicit criteria for making judgments. These specific criteria are listed by broad categories in the student objectives. Neither subjective nor objective evaluations develop independently, but they work together as students grow in understanding and appreciation of varied points of view.

The consideration of controversial issues often falls in the category of Evaluation because these issues reflect differences of opinion or values. However, if a student is arguing issues currently being covered in the news, these issues are really being evaluated by the news writers. The student's arguments then consist of choosing an expert with whom the student agrees or disagrees, remembering what the expert said, and repeating that in the discussion. Therefore, for a higher level of information, the teacher should try to encourage discussion of issues on which discussion and expert evaluation is not already available in the news or in written works. For example, Sanders describes a project in history and problems of democracy at the Senior High School level.³

Bloom⁴ proposes that Evaluation is one of the most important categories of educational objectives because all citizens of all nations have a responsibility to help evaluate and then resolve the diverse problems of modern society. In a democracy, the need for evaluation is apparent.

9. EVALUATION

Discussion

Gall says: "A primary characteristic of any democratic society is the presence of choice — choice of religions, occupation, political affiliation, geographic location, etc. People hopefully make these choices after weighing the alternatives against a carefully selected set of values. For these reasons it is essential that teachers provide students with opportunities for exploring, developing, and using a value system. This goal is fostered by the use of evaluation questions."⁵

Therefore, one critical objective of reading instruction should be to help students develop the ability to consider ideas from a variety of viewpoints; to have a clear view of the criteria being used; and to make highly conscious, responsible, and objective evaluations. It is equally important that opportunity be provided for subjective kinds of evaluation and that students know that their personal evaluations are worthy of consideration.

9. a) ARTICULATES OWN SUBJECTIVE VALUES, OPINIONS, OR PURPOSES AND USES THEM AS CRITERIA FOR MAKING JUDGMENTS

9. EVALUATION Subjective Standards K-3

1. Use class discussions to elicit individual opinions for:

- Does the story have a good beginning? Why or why not?
- Do the characters seem real? Why or why not?
- Is the outcome of the plot convincing? Why or why not?
- Does the author use colorful language? Explain.

2. Encourage students to develop the habit of asking themselves such questions independently about the books they read.

3. Encourage students to develop subjective criteria for judging literature.

- Would you have acted as _____ did when he _____
(fictional character) (did something which ?)
_____ implies a value or set of values which the student can relate to his own values)
- Why or why not?

Examples:

William Tell refusing to bow to Gessler's hat, or
Abraham Lincoln's attitude toward books he had borrowed

4. A goal might be for students to work toward a gradual translation of their *subjective* criteria into *objective* criteria [For enumeration of objective criteria, see 9.b) and 9.c).]

9. a) **ARTICULATES OWN SUBJECTIVE
VALUES, OPINIONS, OR PUR-
POSES AND USES THEM AS CRI-
TERIA FOR MAKING JUDG-
MENTS**

9. **EVALUATION**
Subjective Judgments
K-9

Students and teachers might work together to develop checklists to be used for varied kinds of evaluations. For example:

Evaluating Television Shows

- Did you like the people in the program? Why or why not?
- Was there enough action in the program? Explain.
- (If a factual program) Did the facts seem accurate and true? Explain.
- On what basis do you select to watch particular programs?

Evaluating Class Discussions

- Did we stick to the point? Justify the opinion.
- Was the topic worth the time we used for the discussion? Why or why not?
- What was the quality of the points made during the discussion?
- What kind of climate of attention did we provide for people as they had the floor?

Evaluating Books and Stories

- Did the author make you believe his/her ideas?
- Did the author seem to understand people and their problems?
- Did the author present only one side or more than one side?
- Was the author able to hold your attention with the story?
- Based on your feeling about the rest of the book or story, did the ending seem credible?

9. **EVALUATION**
Subjective Standards
K-3

Questions from the second grade MCPS literature unit on *Stone Soup* illustrate how many different thinking skills are combined in discussing a story. (See pages II-7 — II-9.)⁶

1. What excuse did the peasants make when the soldiers asked for food?
(Location of given fact; the story states: "We have had no food for ourselves for three days," said Paul.)
2. Why did they say they had no food?
(Location of given fact)

9. a) *ARTICULATES OWN SUBJECTIVE
VALUES, OPINIONS, OR PUR-
POSES AND USES THEM AS CRI-
TERIA FOR MAKING JUDG-
MENTS*

9. **EVALUATION**
Subjective Standards
K-3

3. Did the soldiers believe them?
(Interpretation; drawing an implication (inference) from evidence: "The three soldiers talked together.")
4. Were the peasants being selfish?
(Evaluation: calls for judging of soldiers' actions and values in light of their own values — what they would have done under the same circumstances. The teacher might foster a discussion that would bring out that different people live in different circumstances which may make them act differently. It may not be a simple selfishness. The students have to think about situations which may be beyond their experience — for example, lack of economic security.)
5. Why do you think they feared strangers?
(Interpreting motives, feelings, actions of characters)
6. What do you think [the three soldiers] said to each other?
(Prediction: Filling in — interpolating — missing information)
7. After they started making the stone soup, did the soldiers directly ask for anything again?
(Location of given fact)
8. Why do you think one soldier said that a bit of beef would make the soup good enough for a rich man's table?
(Interpretation)
9. Did the peasants realize they were being tricked into providing food?
(Interpretation)
10. Did you ever try to use a round-about way to get something you wanted? Did it work?
(Interpretation)
11. Related activities
(Synthesis)

9. a) *ARTICULATES OWN SUBJECTIVE VALUES, OPINIONS, OR PURPOSES AND USES THEM AS CRITERIA FOR MAKING JUDGMENTS*

9. **EVALUATION**
Subjective Standards
K-5

The following suggested directives and questions are from the MCPS *English Language Arts Course of Study (Elementary Level)*:⁷

Kindergarten: *Emily Emerson's Moon*, by Jean Merrill

(p. K-2) Have you ever made a promise that you couldn't keep? What happened? How do you feel about it?

(p. K-4) Did the children understand the nature of a promise?

Grade 1: *Herman the Loser*, by Russell Hoban

(p. I-3) How do you think Herman felt when he lost the watch?

What do you think about Father's answers to Herman's questions?

How do you think Herman felt when he found the watch?

(p. I-5) Did the children understand what Father meant when he called Herman a finder?

Grade 2: *Down, Down the Mountain*, by Ellis Credle

(p. II-3) Do you think Hetty and Hand did the right thing in giving their turnips away?

Would you have done the same thing?

(p. II-4) Did the children conclude that satisfaction sometimes results from kindness to others as well as from hard work?

Did the children comprehend the fact that many people live in ways very different from their own?

Grade 3: *Hi Tom*, by Nanda Ward

(p. III-3) If Tom lived next door to you rather than on Hermit Mountain, would you like to play with him? Why?

Do you think that the author really understood the way boys and girls feel?

What part of the story tells you that she does or does not?

(p. III-4) Did the children show some appreciation for how the mountain dweller's language reflects the culture of the people?

9. a) **ARTICULATES OWN SUBJECTIVE
VALUES, OPINIONS, OR PUR-
POSES AND USES THEM AS CRI-
TERIA FOR MAKING JUDG-
MENTS**

9. **EVALUATION**
Subjective Standards
K-6

Grade 4: *Ginger Pye*, by Eleanor Estes

(p. IV-7) Do you like the story so far? Why?

Since this story makes various appeals to children, they are almost sure to respond favorably to it. However, should a child react in a negative fashion, the teacher should explore his criticism with him.

(p. IV-10) Did the children become more aware that mutual love and respect by family members enrich the lives of all?

Did the children seem to be more aware that there is responsibility in owning a pet?

Grade 5: *Poetry of Awe and Wonder*

"To An Aviator," by Daniel Whitehead Hicky

(p. V-11) How would familiarity with beauty make you feel about walking "earth's common ways?"

"The Falling Star," by Sara Teasdale

(p. V-13) Are there beautiful things you want but you cannot hold?

Grade 6: *Daniel Boone*, by James Daugherty

(p. VI-3) Every once in a while the author gives us some insight as to how Rebecca felt about the many moves into the wilderness. Let's watch for any clues as to how she felt and see whether we can agree about what sort of person she is.

(p. VI-6) In discussion and comments, do the students reflect understanding that "frontiers" need not be geographically locatable but the new approaches to solving today's problems (e.g., health, the accommodation of nations on a shrinking planet, knowledge of one's self) may also be considered frontiers?

9. a) *ARTICULATES OWN SUBJECTIVE
VALUES, OPINIONS, OP PUR-
POSES AND USES THEM AS CRI-
TERIA FOR MAKING JUDG-
MENTS*

9. **EVALUATION**
Values
7

One of the concepts included in this objective is the student's own subjective values. This concept is defined and explained in a seventh grade unit in the MCPS *English Language Arts Course of Study (Secondary Level)*.⁸ Some parts of the unit related to values follow:

Grade 7, Illustrative Units, pp. VII-1 to VII-4

Ideals (or Search for Values) – A Unit to be Developed by the Teacher

Teacher Purposes:

- To help students identify the values and value systems of the characters in the literature they read
- To encourage students to formulate values for themselves

Desired Student Outcomes:

- Identifies the ideals and values expressed through literature
- Formulates values through the vicarious experience of literature
- Develops a consciousness of group ideals and needs
- Sets standards of personal conduct in work and play
- Begins to develop taste and judgment of what constitutes a "good" story

Literature is based upon and enlarges human experiences. Human experience involves decisions and actions based upon values. The reader of literature vicariously becomes involved in situations he may never have encountered and thus becomes in some measure prepared for similar situations which he may later encounter in his own life. He is present as values collide and clash; he makes judgments and choices just as he must do in life; he selects heroes to admire and emulate; he acquires and applies his values in the most effective way — through example and emulation.

For seventh graders, a literature unit on ideals should focus upon personal conduct. The seventh grade student is still somewhat self-centered and can best deal with abstractions when they relate to his own life. However, the selections he reads should help him see himself in relation to the groups to which he belongs and the society in which he lives. As he reads, he should be asked questions not only about the content and form but about the moral and ethical values which clash in the situation depicted. In addition to the questions asking What, When, Where, How, and Why, should be questions asking What should have happened? Why should it have happened? What ideas caused this choice to be made? Were the choices based on known or understood principles? Were the choices good or bad? What ideal has made you answer in this way? In so questioning, the teacher encourages the child to identify value systems, to select values, and to make judgments based upon them.

9. a) *ARTICULATES OWN SUBJECTIVE
VALUES, OPINIONS, OR PUR-
POSES AND USES THEM AS CRI-
TERIA FOR MAKING JUDG-
MENTS*

9. **EVALUATION**

Values

7

CONTENT

Values are the standards, received through indoctrination or selected intellectually, on the basis of known principles, by which one judges the worth of a person, an idea, an object, or an action.

People's behavior reveals their values.

What an individual or a group perceives as an ideal is based upon what he or the group values.

Ideal behavior is the mean between the extremes of defect and excess. Literature extends individual experience in perceiving and testing values. Literature reveals ideas and values.

Ideas and values are revealed in stories through the thoughts, feelings, and actions of the characters and through the ideas expressed and implied by the author.

One approach for dealing with a unit on ideals:

- Encourage students to read stories which appeal to their natural interests in such ideals as physical prowess, group loyalty, and personal courage.
- Engage in spontaneous non-technical discussion.
- Teacher's questions should gradually stimulate students to generalize about the ideas expressed in each selection read.
- Discussion should ultimately aim at identifying common elements in all selections.
- Students should attempt to formulate a statement which expresses their concepts of the ideal.

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**

Objective Judgments

4-9

Whether the student would use the criterion of accuracy, consistency, adequacy, clarity, relevancy, or validity for making judgments and answering the following questions would depend on purpose, the kind of information desired, and the sophistication of the student. For example:

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Objective Judgments
19

Evaluating Sources of Information

- Which of these sources seem more appropriate for your purpose? Explain.
- What does "Authorities say . . ." mean to you? Explain.
- What does "Informed sources say . . ." mean to you? Explain.
- Does this author seem to have a bias? Why or why not?
- Do the views of this writer seem to be supported by facts? Discuss.
- Do the views of these writers seem to agree?

Evaluating Cause and Effect Statements

- Does the effect seem valid in view of the stated causes?
- Can you test to see whether this is really a cause and effect relationship?
- The author gives one cause. Do you think this is accurate? Could there be other causes?

9. **EVALUATION**
Evaluation of non-print
material
7-12

Below is a list of criteria used in the Montgomery County Public Schools to evaluate filmstrips, 8mm filmloops, slides, and transparencies.⁹ Have the media specialist in your school obtain these materials from the Evaluation and Selection Division of the Department of Educational Media and Technology so that your students may evaluate such materials for purchase. (See Student Involvement Policy, revised September 19, 1973, Montgomery County Board of Education.) Use the following criteria to help with the evaluation:

- I. Is the content of the material well organized and well balanced?
 - A. Have the principles of learning been followed in developing the material, e.g., reinforcement — transfer?
 - B. Is the material presented logically and clearly?
 - C. Is the sequence developed adequately?
 - D. Is data sufficiently comprehensive to be useful?
 - E. Is the content appropriate for this type of presentation?
 - F. Is the material imaginative when imagination is really needed?
 - G. Is the quality of the script or commentary satisfactory?
 - H. Is the music or background satisfactory?
 - I. Are the titles, labels, or captions appropriate?
 - J. Is there extraneous or unnecessary material?

**9. b) USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS**

9. EVALUATION
Evaluation of non-print
material
7-12

II. Is the technical quality of this material acceptable?

A. Is the visual image satisfactory?

1. Is the photography clear and artistic?
2. Does it have enough close-ups?
3. Are printed items adequate in size?

B. Is the quality of sound clear and intelligible?

C. Is color used effectively?

D. Are sound and visual image synchronized?

9. EVALUATION
Evaluation of Tape and
Phonograph Recordings
7-12

Below is a list of criteria used in the Montgomery County Public Schools to evaluate tape and phonograph recordings.¹⁰ Have the media specialist in your school obtain these materials from the Evaluation and Selection Division of the Department of Educational Media and Technology so that your students may evaluate such materials for purchase. (See Student Involvement Policy, revised September 19, 1973, Montgomery County Board of Education.) Use the following criteria to help with the evaluation.

I. Is the content of this material well organized and well balanced?

- A. Have the principles of learning been followed in developing the material, e.g., reinforcement — transfer?
- B. Is the material presented logically and clearly?
- C. Does the material achieve its stated purpose?
- D. Is the content appropriate for presentation in recorded form?
- E. Does the material complement printed and visual teaching resources in the same subject area?
- F. Is the quality of the script or commentary satisfactory?

II. Is the technical quality of this material acceptable?

- A. Is the recording clearly labeled? (title, number indicating playing sequence, and speed)
- B. Is the type of material used for the record or tape durable?
- C. Is the quality of sound satisfactory?

1. Are the speakers' or actors' voices clear and understandable?
2. Is the music free of distortion?

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Evaluation of Charts, Maps
and Globes
7-12

Below is a list of criteria used in the Montgomery County Public Schools to evaluate charts, maps, and globes.¹¹ Have the media specialist in your school obtain these materials from the Evaluation and Selection Division of the Department of Educational Media and Technology so that your students may evaluate such materials for purchase. (See Student Involvement Policy, revised September 19, 1973, Montgomery County Board of Education.) Use the following criteria to help with the evaluation:

SPECIFIC CRITERIA FOR THE EVALUATION OF CHARTS

- I. Is the content of this material well organized and well balanced?
 - A. Is the material presented logically and clearly?
 - B. Does the material achieve its stated purpose?
 - C. Does the chart aid conceptualization of subject matter?
 - D. Is the content presented as clearly and simply as possible for the level intended?
 - E. Is material arranged in logical sequence?
 - F. Are charts presented in a series?
 - G. Is the scale or size such that comparisons can be made between or among charts?
 - H. Are symbols adequately explained?
- II. Is the technical quality of this material acceptable?
 - A. Is printed material sharply and clearly defined?
 - B. Is the media used durable and opaque?
 - C. Is some provision made for display?
 1. Are the charts provided with wall attachments?
 2. Are the charts mounted on a tripod or other floor display holder?
 3. Is the holder easy to manipulate?
 4. Does the holder take only a reasonable amount of space?

SPECIFIC CRITERIA FOR THE EVALUATION OF MAPS

- I. Is the content of this material well organized and well balanced?
 - A. Is the material presented logically and clearly?
 - B. Does the material achieve its stated purpose?
 - C. Is the project suitable for use at the level intended?
 - D. Is the project suitable for the content to be shown?
 - E. Is the map scale suitable for the purpose intended?
 - F. Is the map area adequate for the purpose intended?
 - G. Is the legend adequately and clearly presented?
 - H. Are color symbols pleasing but distinctive in quality?
 - I. If raised-relief technique is used, is vertical exaggeration excessive?
 - J. Are latitude and longitude clearly delineated?
 - K. Are contents dated when this is a significant factor in their utilization?
 - L. Are the contents developed on a comparable basis if the map is part of a series?
 - M. Is there too much detail?

9. b) USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS

9. EVALUATION
Evaluation of Charts, Maps
and Globes
7-12

II. Is the technical quality of this material acceptable?

- A. Is the durability of the material upon which the map is reproduced adequate for the purposes intended?
 - 1. Will it curl along the edges?
 - 2. Will it crack, split, or tear easily?
- B. Are printed materials acceptable in terms of legibility and placement?
- C. Is the mounting device durable?
- D. Is the mounting device appropriate for the intended use?
- E. Is the surface washable?
- F. Is the surface as nonreflecting as possible?
- G. Can marking devices be used on the surface?

SPECIFIC CRITERIA FOR THE EVALUATION OF GLOBES

I. Is the content of this material well organized and well balanced?

- A. Is the material presented logically and clearly?
- B. Does the material achieve its stated purpose?
- C. Are latitude and longitude lines or indicators provided?
- D. Are color symbols pleasing but distinctive in quality?
- E. If raised-relief techniques are used, is vertical exaggeration excessive?

II. Is the technical quality of this material acceptable?

- A. Will materials used in the construction of the globe resist denting and breakage?
- B. Are jointures on globes smooth and relatively unnoticeable?
 - 1. Are map segments well registered?
 - 2. Are places where parts of a globe are joined in construction prominent?
- C. Is the base firm and heavy enough to resist tipping in use?
- D. Will connections of movable parts deteriorate or become separated through use?
- E. Is there an axis provided for the globe?
- F. Is a place provided for the storage of an axis pin if it is removable?
- G. Is the surface soil-resistant and cleanable?
- H. Is the surface made to be marked upon?

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Evaluation of Books
Non-Fiction
7-12

Below is a list of criteria used in the Montgomery County Public Schools to evaluate books.¹² Have the media specialist in your school obtain books from the Evaluation and Selection Division of the Department of Educational Media and Technology so that your students may evaluate such materials for purchase (See Student Involvement Policy, revised September 19, 1973, Montgomery County Board of Education.) Use the following MCPS criteria to help with the evaluation:

NONFICTION

I. Purpose

- A. What is the overall purpose of the book?
- B. How well is the purpose accomplished?
- C. For whom is the book intended?

II. Author and Publisher

- A. Is the author competent and qualified in the field?
- B. What are the reputation and significance of the author and the publisher in the field?

III. Authenticity

- A. Is the material factually accurate? Objective in presentation? An authentic presentation of a particular point of view?
- B. Is the material up-to-date?
- C. Are information sources well documented?
- D. Are translations and retellings faithful to the original?

IV. Appropriateness

- A. Does the material promote the educational goals and objectives of the curriculum of Montgomery County?
- B. Is it appropriate to the level of instruction intended?
 - 1. Is the vocabulary appropriate?
 - 2. Is the presentation of concepts appropriate to the ability and maturity of the students?
 - 3. Illustrations:
 - a) Are they appropriate to the subject and age level?
 - b) Do they portray realistic human qualities?
 - c) Do they avoid stereotypes?
 - 4. Are the methods of development appropriate?
 - 5. Is a logical scope and sequence developed?
 - 6. Is the book readable, clear, and appropriate for the level and subject?
 - 7. Does it have literary merit?

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Evaluation of Books
Non-Fiction
7-12

C. With respect to controversial material:

1. Are the sources, purposes, and points of view readily identifiable?
2. Is prejudicial appeal readily identifiable? Excessive emotionalism?
3. Are there other materials available that present different and representative points of view concerning the problems and issues?

D. Is the interest level appropriate to the user?

1. Will the material stimulate the curiosity of the user?
2. Will the material appeal to many students?

V. Content

- A. Is the content of this material well presented by providing adequate scope, range, depth and continuity?
- B. Have the principles of learning been followed in developing the material, e.g., reinforcement – transfer?
- C. Is the material in each chapter presented logically and clearly?
- D. Does the material achieve its stated purpose?
- E. Does this material present information not otherwise available?
- F. Does this material give a new dimension or direction to its subject?
- G. Is the content clearly outlined in the table of contents?

1. Is the pagination definite and clear?
2. Are chapter titles and subtitles clearly outlined?

H. Is appended material useful?

I. Are pupil aids to learning provided?

1. Is there a glossary?
2. Are aids to pronunciation and meaning provided?
3. Are summaries and reviews provided where appropriate?
4. Are exercises and activities appropriate and provocative?
5. Is a variety of related materials listed?

J. Is the index adequate for pupils at the level for which book is intended?

K. Do the visual aids – e.g., pictures, maps, graphs, charts – contribute to the development of the text?

1. Are they attractive?
2. Are they placed for greatest usefulness?

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Evaluation of Books
Non-Fiction
7-12

3. Are they adequate in number?
4. Where appropriate, are the illustrations multiethnic and free from stereotypes?

L. Is the copyright date a significant factor in evaluating usefulness of content?

VI. Technical Quality

- A. Is the size of the book appropriate for use at the level of interest?
- B. Is the binding durable and strong?
- C. Is the binding sewn?
- D. Is the cover attractive?
- E. Is the paper durable and opaque?
- F. Is the typography clear and easy to read?
- G. Is the type size appropriate for the level intended?
- H. Are the page layouts well designed?
- I. Is the space between the lines appropriate for the level intended?
- J. Illustrations
 1. Is the art or photographic quality acceptable (accurate representation, sharpness, composition, color)?
 2. Is there a good balance between artistic technique and educational need?
 3. Are the captions readable?
 4. Are the illustrations and captions suitable for teaching and learning purposes?
 5. Are illustrations located properly for greatest usefulness?
 6. Are the illustrations adequate in number?

VII. Supporting Opinion

- A. Does it appear on one or more reputable book lists or selection aids?
- B. Has it been favorably reviewed by experts in the field?

VIII. Supplementary Information for Textbooks

- A. Are teacher's aids provided?
- B. Are teaching suggestions practical and provocative?
- C. Does teacher's guide strengthen presentation of textual materials?
- D. Is a useful bibliography provided for teachers?
- E. Are evaluation programs provided?

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Evaluation of Books
Fiction
7-12

Below is a list of criteria used in the Montgomery County Public Schools to evaluate books.¹³ Have the media specialist in your school obtain books from the Evaluation and Selection Division of the Department of Educational Media and Technology so that your students may evaluate such books for purchase. (See Student Involvement Policy, revised September 19, 1973, Montgomery County Board of Education.) Use the following MCPS criteria to help with the evaluation:

SPECIFIC CRITERIA FOR THE EVALUATION OF LIBRARY BOOKS AND TEXTBOOKS

Fiction and Other Literary Forms

The criteria established for the selection of fiction have much in common with the criteria established for the selection of non-fiction books. However, there are differences which relate to the author's purpose, development of the theme and story, and the level of the audience for whom the book is written. Suggestions for fiction criteria are as follows:

I. Purpose

- A. What is the purpose, theme, or message of the book? How well does the author accomplish this purpose?
- B. If the story is humorous, is the humor the type that will appeal to children? To young adults?
- C. If the story is fantasy, is it the type that has imaginative appeal and is suitable for children? For young adults?
- D. Will the reading of the book result in more compassionate understanding of human beings?
- E. Does it offer an opportunity to better understand and appreciate the aspirations, achievements, and problems of various minority groups?
- F. Are any questionable elements of the story an integral part of a worthwhile theme or message?

II. Content

- A. Does a story about modern times give a realistic picture of life as it is now?
- B. Does the story avoid an oversimplified view of life, one which leaves the reader with, for example, the general feeling that life is sweet and rosy or ugly and meaningless?
- C. When factual information is a part of the story, is it presented accurately?
- D. Is prejudicial appeal readily identifiable by the reader?
- E. Are concepts appropriate to the ability and maturity of the reader?
- F. Is there good plot construction, with logical development and minimum of coincidence?
- G. Do characters speak in a language true to the period and section of the country in which they live?
- H. Are characters created with individual human qualities, or are they stereotypes of any cultural group?

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Evaluation of Books
Fiction
7-12

- I. Does the book offend in some special way the sensibilities of a minority group by the way it presents either the chief character or any of the minor characters?
- J. Is there preoccupation with sex, violence, cruelty, brutality, and aberrant behavior that would make the book inappropriate for children? For young adults?
- K. Is the language in good taste?
 - 1. If there is use of offensive language, is it appropriate to the purpose of the text? For children? For young adults?
 - 2. Is dialect authentic, or is it overdrawn and inconsistent, giving a false, author-created dialect or false idiom?
 - 3. Is the book free from derisive names and epithets that would offend minority groups? Children? Young adults?
- L. Does the book have literary and human values?
 - 1. Is the book well written?
 - 2. Does the story have appeal?
 - 3. Does the story give a broader understanding of human behavior without stressing differences of class, race, color, sex, education, religion, or philosophy in any inimical way?
 - 4. Does the book make a significant contribution to the history of literature or ideas?

III. Technical Quality

- A. Is the size of the book appropriate for use at the intended level?
- B. Is the binding durable and strong?
- C. Is the cover attractive?
- D. Is the paper durable and opaque?
- E. Is the typography clear and easy to read?
- F. Is the type size appropriate for the level intended?
- G. Are the page layouts well designed? Are there ample margins?
- H. Is the space between the lines appropriate for the level intended?
- I. Illustrations
 - 1. Are the illustrations appropriate and in good taste?
 - 2. Are the illustrations realistic in relation to the story?
 - 3. Do the illustrations avoid stereotypes? Ethnocentrism?
 - 4. Is the art or photographic quality acceptable (accurate representation, sharpness, composition, color?)
 - 5. Are the captions readable?
 - 6. Are illustrations located properly for greatest usefulness?

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Evaluation of Books
Fiction
7-12

IV. Supporting Opinion

- A. Does the book appear on one or more reputable book lists or selection aids?
- B. Has it been favorably reviewed by experts in the field?

9. **EVALUATION**
Standards for Making
Judgments
Grades 4/5

The following activities, illustrations of evaluation, are from MCPS *Elementary Social Studies Illustrative Units*.¹⁴

Grade 4: "Over, Around, and Through the Appalachians to the Mississippi River Valley"

- 9.b)(5) Uses criterion of relevancy
- 9.b)(6) Uses criterion of validity

(p. 17) Who were the Indians of the region?

Who were the outstanding leaders?

What were the feelings of the Indians about the coming of the pioneer-settlers?

What were the reactions of the Indians to this movement westward?

Discuss the ethics of the white man's relationship with the Indian. Discuss problems of the American Indian today which are the result of this relationship long ago.

Grade 5, "Tropical Hawaii and Frontier Alaska: Lands of Contrast"

- 9.b)(1) Uses criterion of accuracy
- 9.b)(3) Uses criterion of adequacy of data
- 9.b)(4) Uses criterion of clarity

(p. 92) Organize a committee to act as a travel bureau and to provide all of the information generally provided by such an agency.

Distance
Transportation
Places of interest

9. b) *USES ESTABLISHED STANDARDS
AS CRITERIA FOR MAKING
JUDGMENTS*

9. **EVALUATION**
Standards for Making
Judgments
4-5

Have another group prepare a "selling" talk on Alaska.

Have both groups present their information together.

Which group has made their spot seem more attractive?

Evaluate contributions for accuracy of information. 9.b)(1)

Evaluate contributions for inclusiveness of information. 9.b)(3)

Evaluate contributions for clarity and quality of presentation. 9.b)(4)

9. **EVALUATION**
Established Standards
7-12

Examples of activities, to determine the student's ability to use specific criteria in making objective evaluations, may be found in Bloom, et al.¹⁵ The examples include test illustrations in both essay and objective form.

Accuracy The student's task is to determine which of two given experiments is more accurate.

Consistency The student's task is to determine the consistency of the details and parts of given scientific information.

The student's task is to determine the consistency between two statements.

The student's task is to determine the consistency between arguments and policies.

Relevancy The student's task is to determine the relevance of different choices to given information.

9. c) *USES STANDARDS OF APPROPRIATENESS AND EFFECTIVENESS FOR JUDGING LITERATURE*

9. **EVALUATION**
Literary Standards
7-12

Examples of the kinds of activities teachers might use in order to determine whether the students are able to effectively evaluate literature may be found in Bloom, et al.¹⁶ Specific samples are given for the following:

- Evaluation of any literary work
- Evaluation of a poem
- A pattern or preference for any literary work
- A pattern or response to any literary work

9. **EVALUATION**
Literature
10-12

The following examples are abstracted from the MCPS *English Language Arts Course of Study (Secondary Level)*¹⁷ as brief illustrations of each of the specified student objectives:

Grade 10: Genre: Biography

9.c)(1) **Evaluates use of a particular form or genre**

(p. X-13) Why is the life [story] as recorded in this biography, worthy of being written?

Has the person achieved fame?

Has the person helped his/her fellowman?

Is his/her life an inspiration?

What did he/she value or by what principles did he/she live?

Grade 10: *The Human Comedy*, by William Saroyan

9.c)(3) **Evaluates setting**

(p. X-2) Where and when does the story take place?

How is the setting important to the story?

If the setting shifts from place to place, how does the author indicate this to the reader?

9. c) *USES STANDARDS OF APPROPRIATENESS AND EFFECTIVENESS FOR JUDGING LITERATURE*

9. **EVALUATION**
Literature
10-12

Grade 11: *Huckleberry Finn*, by Mark Twain

9.c)(2) **Evaluates plot structure, development, or resolution**

(p. XI-43) How does the river control the plot?

(p. XI-47) How do the King and the Duke force Huck and Jim to become involved with the life and society of their times? How does this affect their freedom?

What decisions must Huck and Jim make?

What are the most important? Why?

What are the most difficult? Why?

How are these decisions important to the development of the plot?

9.c)(4) **Evaluates character delineation, motivation, or development**

(p. XI-43) Although Huck is attracted by the "respectable world" of Tom, the widow Douglas, and Miss Watson, discuss how he differs from each of these people.

Does Tom Sawyer change during the course of the story?

Does Huck change?

What is the difference between the way the two boys regard Jim?

(p. XI-46) What part of society do the Grangerfords represent?

What traits do they value?

9.c)(5) **Evaluates point of view or tone (mood)**

(p. XI-44) What kind of world does Huck see?

What view of human nature do we get through Huck's eyes?

How does Huck compare and contrast with this view of humanity?

How does Huck begin to assume the shape of a hero?

9. c) *USES STANDARDS OF APPROPRIATENESS AND EFFECTIVENESS FOR JUDGING LITERATURE*

9. **EVALUATION**
Literature
10-12

Grade 12: "On His Blindness" by John Milton

9.c)(6) Evaluates author's style

p. XII-12 Discuss with students the emotional structure of the poem.

How do you reconcile Milton's deep religious faith (willingness to wait) with the attitude expressed in the octave (bemoaning his fate)?

What is the significance of the shift in point of view (from first person to third)?

What effect does the sentence structure have upon the tone of the poem?

How does the tone contribute to the meaning?

How does Milton's attitude give meaning to life?

Does the poem provide an enriching experience for one who does not share Milton's convictions?

Grade 12: *Macbeth*, by William Shakespeare

9.c)(7) Evaluates literary language used

(p. XII-7) Ask students to discuss Shakespeare's use of metaphor and simile in such passages as: "My life has fallen into the sear, the yellow leaf. . ." (plant symbolism)

Read aloud and consider with students the total effects created by sound and rhythm in such a passage as: "Duncan is in his grave; after life's fitful fever, he sleeps well." (Act III)

Note the differences in language of witches when talking to Macbeth and when talking among themselves.

9. c) (5) EVALUATES POINT OF VIEW

9. EVALUATION
Point of View
7-12

Source: *Thinking Box*¹⁸

CRITICIZING



SCIENCE
37
Activity

In Rachel Carson's book, *The Silent Spring*, she showed evidence that pollution caused by insecticides is killing off large numbers of birds and fish. Her opinion was that man was using insecticides without regard to the consequences.

What do you think of her point of view? Give reasons for your opinions.

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CRITICIZING

SCIENCE
37
Analysis

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When you criticize, you must give reasons for your opinions. Did you make your reasons clear in your criticism? Do you think they are good enough reasons to convince someone with another opinion?

9. c) (5) *EVALUATES POINT OF VIEW
OR TONE (MOOD)*

9. **EVALUATION**
Point of View/Tone
10-12

In the evaluation of a poem, story, or other kinds of literature, it may be important to summarize the author's point of view or mood and the ways these are illustrated.

For example:

- As indicated in lines _____ to _____, what is the author's attitude toward literature? What words make that attitude so evident?
- Is the author describing himself in the poem? What aspects of himself is he describing? Locate lines that point this out.
- Is there a relationship between the author's attitude as indicated in lines _____ to _____ and the author's mood as indicated in lines _____ to _____?
- Summarize the mood as described in paragraph _____.

9. c) (7) *EVALUATES LITERARY LAN-
GUAGE AND/OR ILLUSTRATION*

9. **EVALUATION**
Illustrations
4-12

BOOK-ART CRITIQUE¹⁹

Illustrator _____

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

9. c) (7)EVALUATES LITERARY LANGUAGE AND/OR ILLUSTRATION

9. EVALUATION
Illustrations
4-12

MATERIAL REMOVED DUE TO COPYRIGHT RESTRICTIONS

9. EVALUATES COMMUNICATIONS

9. EVALUATION
The Newspaper
1-9

The following excerpts from MCPS Bulletin No. 242, *492 Ways to Use a Newspaper in the Elementary Classroom*, are examples of activities related to the following areas of evaluation.

9.a) Articulates his own subjective values, opinions, or purposes and uses them as criteria for making judgments

9. EVALUATES COMMUNICATIONS

9. EVALUATION The Newspaper 1-9

- Prepare for a panel discussion on comic strips, commenting on:

the title	humor
the artist	influence
the subject matter	fairness
the merits	the faults
reader appeal — boys, girls, adults	

- Collect pictures of smiles. Decide what makes a good smile.

9.b) Uses established standard as criteria for making judgments

- Evaluate the appropriateness of the headlines on the front page. Relate previous readings on the subject.

9.d)(1) Judges effectiveness of advertising techniques

- Use advertisements from the newspaper as the basis of an oral report on the importance of advertising:

- to the paper
- to the advertiser
- to the consumer

9.e) Independently establishes objective criteria for evaluating ideas and uses them

- Form committees to report on:

- Best Comic for Today
- My Favorite Cartoon
- A Worthwhile Editorial
- Sportsman of the Month

- Make a large calendar of the month. Selectively post the news of each day. At the end of the month, choose the news most important to a yearly calendar.
- Make a scrapbook of the most important newspaper stories for several weeks. At the close of the collection, mark the items, if any, which you think might be included in history books two hundred years from now. Plan a bulletin board with the clippings which you feel are of historical importance.
- Evaluate the news. Plan a bulletin board with the two titles:

- We View with Alarm
- We View with Pride

9. e) *INDEPENDENTLY ESTABLISHES
OBJECTIVE CRITERIA FOR
EVALUATING IDEAS AND USES
THEM*

9. **EVALUATION**
Establishing Standards
K-6

Establish a purpose and appropriate standards:

1. Show a picture of a familiar object, such as an automobile.
2. Ask the students whether it is a good picture.
3. Try to get them to see that before they can answer that question, they would have to determine the purpose for which the picture is to be used.
4. Each of the following would be judged by entirely different standards based on purpose:
 - It may be a colorful work of art that is intended to please those who see it.
 - It may be a car advertisement intended to interest people in buying the car.
 - It may be a picture intended to create a nostalgic feeling for an antique car or for the early days when cars were first used.
 - It may be a diagram intended to show how an automobile engine works.
 - It may be an illustration that relates to safety, racing, or travel.
5. Ask the students to set up criteria for judging these different kinds of pictures.
6. Then distribute different kinds of automobile pictures, and ask the students to judge each one against the different criteria they set up.

9. **EVALUATION**
Establishing Standards
K-12

For student practice in setting standards, Sanders suggests:

"Establish a purpose and appropriate standards for evaluating each of the following:

- (A) a policeman
- (B) a school library
- (C) a neighborhood
- (D) a national economic system
- (E) a world government

These sample problems show that the difficulty of the question is related to the complexity of the idea to be evaluated."²⁰

9. e) *INDEPENDENTLY ESTABLISHES
OBJECTIVE CRITERIA FOR
EVALUATING IDEAS AND USES
THEM*

9. **EVALUATION**
Establishing Standards
7-12

Examples of the kind of activity teachers might use in order to determine whether the students have set appropriate criteria or standards may be found in Bloom, et al.²¹ The examples require explicit criteria, demonstration of the relevancy of the criteria, and application of the criteria.

- The student may be asked to write an essay on a poem assigned as outside reading. The essay should include judgments about the poem, the nature of each judgment, why the selected standards are important to the poem, and what aspects of the poem are pertinent to the standards.
- The student may be asked to relate his own position to that of a critic with regard to a particular literary selection to work. The student is directed to state his own critical position and to apply this position to all the episodes and characters mentioned by the critic.
- The student may be asked to compare two poems with similar subjects, indicate which is superior, and justify choice on basis of criteria which he sets up and makes clear in his essay.

FOOTNOTES

1. Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper & Row, Inc., 1966), p. 142.
2. Benjamin S. Bloom (ed.), *Taxonomy of Educational Objectives – The Classification of Educational Goals – Handbook I: Cognitive Domain* (New York: David McKay Co., Inc., 1956), pp. 185-191.
3. Sanders, *Classroom Questions*, pp. 148-150.
4. Benjamin S. Bloom, J. Thomas Hastings, and George F. Madaus, *Handbook on Formative and Summative Evaluation of Student Learning* (New York: McGraw-Hill Book Co., 1971), p. 205.
5. Meredith D. Gall, Barbara Dunning, and Rita Weathersby, *Higher Cognitive Questioning, Mini-course 9, Teachers Handbook* (Beverly Hills: Far West Laboratory for Educational Research and Development, Macmillan Educational Services, Inc., 1971), p. 191.
6. MCPS, *English Language Arts Course of Study (Elementary Level)* Bulletin No. 185, Part I (Rockville, Md.: Montgomery County Public Schools, rev. 1972).
7. *Ibid.*
8. MCPS, *English Language Arts Course of Study (Secondary Level)* Bulletin No. 185, Part II (Rockville, Md.: Board of Education of Montgomery County, 1966).
9. MCPS, *Evaluative Criteria for the Evaluation and Selection of Instructional Materials and Equipment in the Montgomery County Public Schools* (Rockville, Md.: Department of Educational Media and Technology, Montgomery County Public Schools, n.d.), p. 31.
10. *Ibid.*, p. 35.
11. *Ibid.*, pp. 30-33.
12. *Ibid.*, pp. 26-29.
13. *Ibid.*, pp. 24-26.
14. MCPS, *Elementary Social Studies Curriculum Illustrative Units, Vol. II, Gr. 4-6*, Bulletin No. 175 (Rockville, Md.: Montgomery County Public Schools, rev. 1972).
15. Bloom, et al., *Handbook*, pp. 187-188, 208-220.
16. *Ibid.*, pp. 208-220, 744-748.
17. MCPS, *ELA*, Bulletin No. 185, Part II (Secondary).
18. Selma Wasserman, Jack Wasserman, and Louis E. Rath, *The Thinking Skills, Thinking Box* (Westchester, Ill.: Benefic Press, 1969).

19. From the book, *Developing a Successful Elementary School Media Center* by Lillian Glogau, Edmund Krause, and Miriam Wexler. © 1972 by Parker Publishing Co., Inc., West Nyack, New York and used with their permission, p. 179.

20. Sanders, *Classroom Questions*, p. 146.

21. Bloom, et al., *Handbook*, pp. 221-223.

A SUMMARY - - -

THE MCPS COMPREHENSION MODEL

- Defines 9 categories of comprehension
- Describes the 9 categories of comprehension
- Lists the major student goal for each category
- Lists from 6 to 34 Instructional Objectives for each category
- Encompasses literal ↔ critical ↔ creative thinking
- Provides for convergent thinking (one or a limited number of possible answers) and divergent thinking (unlimited number of responses)
- Incorporates the affective (feeling) domain within the cognitive (knowing) domain
- Uses Bloom's Taxonomy of Educational Objectives as a base
- Has modified the Taxonomy to include 9 categories
- Has modified the Taxonomy to be useful for the elementary, junior high, and senior high teacher
- Is cross-referenced (see pages 43-45) with 34 comprehension skill terms commonly used by teachers
- Is cross-referenced (see page 46) with alternate levels of comprehension
- Is cross-referenced with the Montgomery County *Program of Studies* (Cross-references are available through area teacher specialists in reading.)
- Is cross-referenced with other existing Montgomery County Public Schools publications including courses of study and curriculum guides (See Learning Activities sections.)
- Is cross-referenced with existing Department of Pupil and Program Appraisal comprehension objectives and assessment packets (Cross-references are available through area teacher specialists in reading.)

— — — AND A CONCLUSION

THE CHILD

Thinks for Himself¹

Helping a child to make use of his thinking powers aids him in moving toward the fullest development of his potential ability. This is the birthright of every child and the moral obligation of those adults with whom he has constant contact.

The child who thinks aloud with adult guidance gradually acquires techniques by which he can later approach and solve self-identified problems. As thought processes develop, the need for verbalization to reach conclusions becomes less. With increased independence in thinking, the child's ideas become more internalized. This internalization of thought affects behavior and colors perceptions and leads to the evolution of reasonable conclusions.

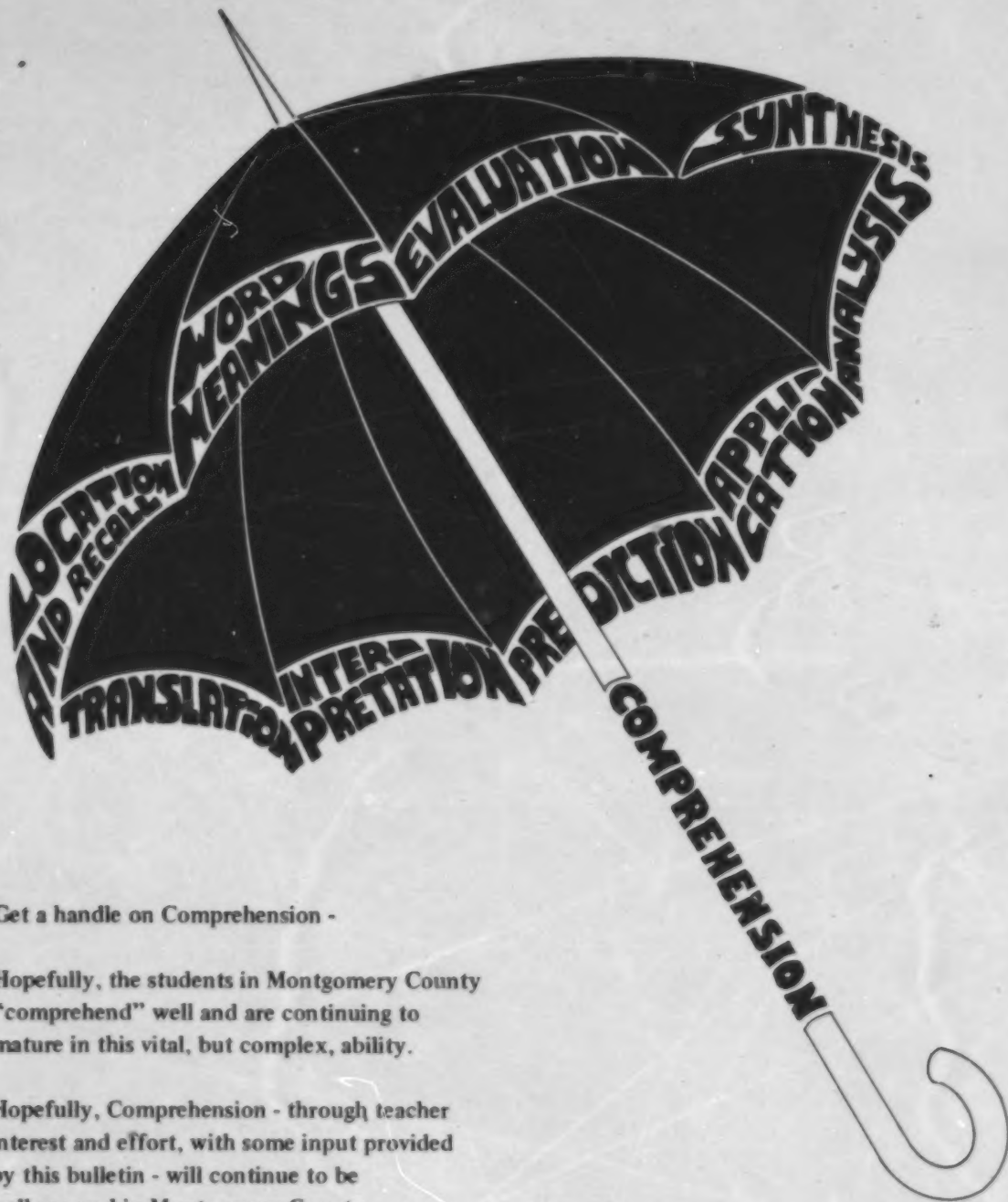
Thinking involves a series of choices and a discarding of ideas as one makes value judgments.

The teacher who strives to help the child become an effective thinker must be skillful in the types of questions he poses and allow enough time so that the answers called forth are his best efforts. Children vary in the time they need to deliberate. A slow-gearred mind is not necessarily intellectually inadequate. The child who is unable to respond quickly should be given thought questions sufficiently in advance so that he can develop insight into the thinking process at his own rate.

A good teacher uses every opportunity to have a child think through a problem, encouraging him to estimate and make approximations based on his current understandings. The child should become aware that conclusions and decisions are not irrevocable and need to be substantiated, while still others will be subject to alteration as circumstances change.

. . . the reader must ponder, weigh, compare, and seek logical conclusions as he employs his right to think for himself.

The end of this chapter—COMPREHENSION—must also be the beginning, for Comprehension is a continuum. Each segment is important; each segment is dependent on all the others.



Get a handle on Comprehension -

Hopefully, the students in Montgomery County "comprehend" well and are continuing to mature in this vital, but complex, ability.

Hopefully, Comprehension - through teacher interest and effort, with some input provided by this bulletin - will continue to be well-covered in Montgomery County.

Annotated Resource List



REFERENCES FOR TEACHERS

Print and Nonprint

BOOKS

An asterisk indicates that the book may be found in the MCPS Educational Materials Laboratory, Washington Center.

- *Applegate, Mauree. *Easy in English*. Evanston: Harper & Row, Pubs., 1964.

Creative imagination is encouraged as the child writes. Stress is given to word meaning and punctuation which gives meaning. Each chapter is followed by a "cupboard" of ideas.

All levels

- *Aukerman, Robert C. *Approaches to Beginning Reading*. New York: John Wiley & Sons, Inc., 1971.

This book contains and explains 100 approaches to beginning reading.

All levels

- *Beck, Margaret V., and Pace, Vera M. *A Guidebook - Teaching Library Skills, (Books 1, 2, 3, 4)*. Minneapolis: T. S. Denison & Co., 1966.

Here is a series of four guides that contain exercises for teachers and media specialists to use with students in developing communication skills.

Grade 3 up

- *Bloom, Benjamin S.; Hastings, J. Thomas; and Madaus, George F. *Handbook on Formative and Summative Evaluation of Student Learning*. New York: McGraw-Hill Book Co., 1971.

This book is designed to help classroom teachers use evaluation for the purpose of improving student learning. Evaluation techniques are included to cover levels of education from preschool through high school as well as specific subject disciplines (language arts, social studies, art education, science, mathematics, literature, writing, a second language, and industrial education). One section of the book describes ideas for evaluation which are classified according to Bloom's Taxonomy. Varied purposes of evaluation and varied types of classroom evaluation instruments are described.

All levels

- Cordell, Christobel M. *Geography Can Be Fun*. Portland, Maine: J. Weston Walch, Pub., 1970.

This is a book completely devoted to learning activities designed to be used with geography classes. The activities cover a wide range of skills including anacrostics, games, puzzles, and novel ways to use maps. Photograph activities are also included.

Grades 5-9

- *Dechant, Emerald. *Diagnosis and Remediation of Reading Disability*. West Nyack, N.Y.: Parker Publishing Co., Inc., 1968.

This book was written specifically for the classroom teacher as a practical guide for improving reading instruction. It suggests diagnostic procedures and remedial principles and techniques. Chapter 4 gives a list of comprehension skills as well as a list of suggested books and materials for developing reading skills.

All levels

DeRoche, Edward F., and Gierl, Erika. *Creative Units for the Elementary School Teachers*. West Nyack, N.Y.: Parker Publishing Co., Inc., 1969.

Units are suggested in all content areas with ideas for using newspapers, magazines, road maps, travel folders, reference books, etc.

Grades K-6

The Encyclopedia: A Resource for Creative Teaching and Independent Learning. Chicago: Field Enterprises Educational Corp., 1968.

This pamphlet contains ideas for using the encyclopedia as well as some interesting ideas about the importance of the encyclopedia in the learning process.

Grades 3-7

*"The Futurist." Washington, D.C.: The World Future Society.

This magazine contains articles that deal with predicting future trends and possibilities. The articles deal with topics of current interest. This is a useful magazine for prediction activities as well as for evaluation. The articles deal with such things as world population trends, fossil fuels, and the coming of a new ice age. Teachers can draw from these articles for various learning activities.

Grades 9-12

*Gehard, Muriel. *Effective Teaching Strategies with the Behavioral Outcomes Approach*. West Nyack, N.Y.: Parker Publishing Co., Inc., 1971.

The author gives ideas and strategies for objectives to help students develop critical thinking skills. Suggestions are given for questions which will develop the thinking process.

All levels

Glogau, Lillian; Krause, Edmund; and Wexler, Miriam. *Developing a Successful School Media Program*. West Nyack, N.Y.: Parker Publishing Co., Inc., 1972.

This book contains a wide variety of activities for the students in the areas of Location/Recall. It contains games and ideas for using encyclopedias, atlases, dictionaries, and other media center guides. It also contains many ideas for literature activities and non-print reporting.

Grades K-6

*Groisser, Phillip L. *How to Use the Fine Art of Questioning*. Chicago: Aldine-Atherton, Inc., 1964.

A manual on developing the art of questioning, this book deals with such aspects as how to use questions more effectively, devising good questions, analyzing procedures that get results, and handling pupils' answers with skill and ease. This is a useful general guide with some interesting examples of the various types of questions one can ask.

All levels

*Hall, Nancy A. *Rescue: A Handbook of Remedial Reading Techniques for the Classroom Teacher*. Stevensville, Mich.: Educational Services, Inc., 1969. pbk.

The author offers practical and simple games, activities, and ideas in motivating the student in his desire to learn.

Grades K-8

- *Heilman, Arthur W., and Holmes, Elizabeth Ann. *Smuggling Language into the Teaching of Reading*. Columbus: Charles E. Merrill Publishing Co., 1972. pbk.

Reading is defined as a meaning-making, language-oriented process. Small units of language — words, sentences, and brief paragraphs — are used in the illustrative learning activities to help the student enjoy and manipulate language. (See pages of this bulletin for three of the activities.) The authors note that their goal is to provide teaching and learning activities which can be both fun and growth-provoking. Topics included are Intonation and Reading, Expanding Word Meanings, Critical Reading, Reading-and-Writing Dramatization, and Study Skills.

All Levels

- *Henderson, Richard L., and Green, Donald Ross. *Reading for Meaning in the Elementary School*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969.

This book deals with getting meaning through reading as it is related to students' background of language and experiences.

Grades K-6

- *Herr, Selma E. *Learning Activities for Reading* (2nd ed.). Dubuque, Iowa: William C. Brown Co., 1970. pbk.

The author provides suggestions for literal and critical comprehension activities.

Grades 1-6

- How to Use the "Reader's Guide to Periodical Literature."* New York: The H.W. Wilson Co., n.d.

The H.W. Wilson Company, 950 University Avenue, Bronx, New York, 10452 offers free booklets containing samples of the "Reader's Guide to Periodical Literature." Booklets also contain practice exercises using the guide. Up to 30 copies free.

Grades 5-12

- *Hunkins, Francis P. *Questioning Strategies and Techniques*. Boston: Allyn & Bacon, Inc., 1972.

This is a guidebook describing questioning strategies for both students and teachers. The author details current thinking about questioning, including the models of Bloom, Sanders, Taba, and Suchman. A combination — Hunkins' Strategy — which synthesizes Bloom and Suchman, is diagrammed in a lesson plan.

All levels

- *Hutson, Natalie B. *Stage*. Stevensville, Mich.: Educational Services, Inc., 1968. pbk.

This book contains many ideas and activities in motivating students in dramatics.

Grades K-8

- *Kaluger, George, and Kolson, Clifford J. *Reading and Learning Disabilities*. Columbus: Charles E. Merrill Publishing Co., 1969.

Chapters 14-15 deal with comprehension in content areas, vocabulary development, and factors affecting comprehension. A sequence of comprehension skills, suggestions for developing comprehension, and ideas for building vocabulary are detailed. See pages of this curriculum guide for abstracts from this book.

All levels

- *Karlin, Robert. *Teaching Reading in the Secondary School* (2nd ed.). Indianapolis: Bobb-Merrill & Co., 1972.

This book deals with all areas of reading in the secondary school. Part II — in particular Chapters 5, 6, and 7 — deals with word recognition, study skills, and other aspects of Comprehension. Sample exercises should prove useful to all secondary teachers regardless of their particular subject area.

Grades 7-12

- *Kennedy, Eddie C. *Classroom Approaches to Remedial Reading*. Itasca, Ill.: F.E. Peacock Publishers, Inc., 1971.

Many approaches to the teaching of comprehension skills are discussed.

All levels

- *Lohmann, Idella; Burrus, Dorothy; and Martin, Joanna. *Open Windows to the World*. Oklahoma City: The Oklahoma Publishing Co., 1972. pbk.

Newspaper experiences, using non-graded classroom activities, are divided into sections which correspond to the sections of the newspaper (headlines, editorials, advertising, sports, arts, etc.). Each activity (1) is illustrated with pictures, cartoons, headlines, and content; and (2) includes objective, skill, and directions to student. The objectives are easily cross-referenced to the objectives in this comprehension bulletin. For example:

MCPS — Category, Word Meanings

Objective, 1.d) Distinguishes connotative meanings

Open Windows (p. 159) — Sports, "Did They Win or Lose?"

"Vida's Bid for 20," "Angels Belt Yanks" . . . (actual newspaper headlines)

Objective, To emphasize connotation of words

All levels

- *McCracken, Robert J., and McCracken, Marlene J. *Reading Is Only the Tiger's Tail*. San Rafael, Calif.: Leswing Press, 1972.

This book discusses an approach to reading through thinking and communicating. It explains the importance of listening and speaking skills in the development of reading ability. It contains many activities for teachers to follow using literature. Chapter I discusses the various levels of thinking and communication skills. The book includes a bibliography of children's books as well as some professional references.

Grades K-4

- Miller, Wilma H. *Identifying and Correcting Reading Difficulties in Children*. New York: The Center for Applied Research in Education, Inc., 1971.

Chapter 6 details suggestions for correcting literal comprehension difficulties and recall. Ideas for other comprehension skills — interpretation, reference, predicting outcomes, drawing conclusions, and creative and critical reading — are included.

Grades K-6

- National Reading Center. *Tutor Handbook*. Washington, D.C.: N.R.C., n.d. pbk.

This handbook contains illustrative lessons, one for each of sixty basic reading skills, which may be useful for the classroom teacher or a tutor. The skills include comprehension abilities such as main idea, fact and opinion, interpretation, using a menu, using information in a bus schedule, and summarizing. (Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.)

All levels

National Reading Center. *Problem Solving Exercises*. Washington, D.C.: NRC, n.d. pbk.

There are two exercises for each of sixty basic reading skills. These exercises correspond to the sample lessons in *Tutor Handbook* (above) and may be used to determine need for instruction in a particular skill or as an assessment exercise after instruction. (Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.)

All levels

*Otto, Wayne, and McMenemy, Richard A. *Corrective and Remedial Teaching: Principles and Practices*. Boston: Houghton Mifflin Co., 1966.

Chapter 7 gives ideas for developing comprehension of sentences, paragraphs, whole selections, figurative language, and study skills for remedial readers.

All levels

*Palovic, Lora, and Goodman, Elizabeth B. *The Elementary School Library in Action*. West Nyack, N.Y.: Parker Publishing Co., 1968.

Contains games and activities for media specialists and teachers to use with children to develop communication skills.

Grades K-6

Platts, Mary E. *Anchor*. Stevensville, Mich.: Educational Service, Inc., 1970. pbk.

This is a handbook of vocabulary discovery techniques for the classroom teacher. Word meaning, location and recall, and interpretation activities are included.

Grades K-8

———. *Create*. Stevensville, Mich.: Educational Services, Inc., 1966. pbk.

The author offers practical and simple activities and ideas in motivating students in the field of art.

Grades K-8

———. *Plus*. Stevensville, Mich.: Educational Services, Inc., 1964. pbk.

This book contains practical and simple activities and ideas in motivating students in math.

Grades K-8

———. *Spice*. Stevensville, Mich.: Educational Services, Inc., 1973. pbk.

Spice contains practical ideas, games, and activities that aid the teacher in motivating students in the area of the language arts.

Grades K-8

*Raths, Louis E.; Jonas, Arthur; Rothstein, Arnold; and Wasserman, Selma. *Teaching for Thinking: Theory and Application*. Columbus: Charles E. Merrill Co., 1967.

The application parts of this book contain many useful activities for elementary and secondary teachers to use with their students to develop thinking skills. Activities dealing with observing, comparing, classifying, summarizing, hypothesizing, criticizing, imagining, and interpreting are included. These activities span all subject areas and all grade levels.

All levels

Reiter, Irene M., and Spache, George D. *Why Can't They Read It?* Philadelphia: Polaski Co., 1970.
The authors demonstrate how to use textbooks by (1) analyzing the materials into four Areas of Readability factors:

- a) Vocabulary
- b) Sentence structure
- c) Relationships
- d) Levels of abstraction

and (2) explaining what to do about the materials which give students difficulty.

Grades 5-12

*Roy, Mary M. *Action*. Stevensville, Mich.: Educational Services, Inc., 1967. pbk.

This book contains practical and simple games, activities, and ideas to use with students in physical activities.

Grades K-8

———. *Probe*. Stevensville, Mich.: Educational Services, Inc., 1962. pbk.

The author suggests many ideas and activities in motivating students in science.

Grades K-8

———. *Spark*. Stevensville, Mich.: Educational Services, Inc., 1965.

This book contains practical and simple activities and ideas in motivating students in social studies.

Grades K-8

*Russell, David H., and Karp, Etta E. *Reading Aids through the Grades: Three Hundred Developmental Reading Activities*. (2nd ed.). New York: Teachers College Press, Bureau of Publications, Columbia University, 1970. pbk.

The authors provide suggestions for literal and critical comprehension activities.

All levels

Sciara, Frank, and Walter, Richard B. *Reading Activities with the Tape Recorder*. Dansville, N.Y.: Instructor Publications, Inc., 1973.

Suggestions are provided for reading activities using a tape recorder.

Grades K-6

*Sharp, Evelyn. *Thinking Is Child's Play*. New York: E.P. Dutton & Co., Inc., 1970.

This is an easy-to-read account of ways in which parents and teachers can foster development of children's thinking. Included are accounts of Piaget as a lecturer at the University of Geneva, his observations and meticulous records on his own three children, and comparison of Piaget's and Bruner's interpretations of thought processes. Forty games are described and illustrated, each game using materials found in the home and each for a stated purpose of thought development.

Grades K-4

*Spache, Evelyn B. *Reading Activities for Child Involvement*. Boston: Allyn & Bacon, Inc., 1972.

This book contains 571 reading activities to reinforce reading skills. One of the chapters deals with content reading and another with Interpretation skills.

Grades K-6

*Spache, George D., and Spache, Evelyn B. *Reading in the Elementary School*. Boston: Allyn & Bacon, Inc., 1969.

In Chapter 14 of this book, Spache deals with aspects of understanding and the reader's reaction to what is read. Several comprehension models and critical reading skills are contrasted. Strategies for teaching are presented.

Grades K-6

Spencer, Zane S. *Flair*. Stevensville, Mich.: Educational Service, Inc., 1972.

Practical suggestions are offered for creative writing in elementary school.

*Stauffer, Russell G. *Directing Reading Maturity as a Cognitive Process*. New York: Harper & Row, Inc., 1969.

The reader will find steps in the reading-thinking process, activities to increase comprehension, and suggestions to stimulate thought processes.

All levels

*Stauffer, Russell, G., and Cramer, Ronald. *Teaching Critical Reading at the Primary Level*. Newark, Del.: International Reading Association, 1968.

Teachers are taken through the process of the directed reading-thinking activity at the primary levels of instruction.

Grades 1-3

Thomas, Ellen Lamar, and Robinson, H. Alan. *Improving Reading in Every Class*. Boston: Allyn & Bacon, Inc., 1972.

Chapter 3 gives many helpful suggestions for improving comprehension in math, social studies, English, and science. Ideas include questions which help to develop comprehension skills — getting main ideas, sequence, following directions; drawing inferences; cause and effect; prediction; drawing conclusions; comparisons and contrasts; evaluation; character traits (emotional reactions and motives); and recognizing the author's tone, mood, and intent.

Grades 7-12

Unfinished Stories for Use in the Classroom. NEA Journal. Washington: National Educational Association, 1966.

This book contains unfinished stories, each entitled "What Should _____ Do?" Stories would fit in well with prediction exercises.

Grades 4-8

*Viox, Ruth G. *Evaluating Reading and Study Skills in the Secondary Classroom*. Newark, Del: International Reading Association, 1968.

The author explores ways of evaluating the effectiveness of the students' reading and study skills by finding their strengths and weaknesses in various subject areas. Sample informal evaluation procedures are presented along with suggestions for ways of determining the comprehension and study skills of each student.

Grades 7-12

*Weigand, James (ed.). *Developing Teacher Competencies*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971.

Chapter 6 written by Alfred DeVito suggests techniques for developing creativity; divergent and convergent thinking; and problem solving in the classroom.

All levels

*Wilson, Roy R., Jr. *Teaching Children Language Arts*. West Nyack, N.Y.: Parker Publishing Co., Inc., 1970.

This book deals with the oral-listening phases of language arts and provides ideas for motivating students to use reading, writing, and speaking skills in productive and creative ways. Chapter 14 suggests resources for teachers and provides an annotated bibliography.

Grades K-6

FILMS

F 4875 — *Divergent Questions*, elementary. T. 10 min. Color.

Discussed here are the divergent questions which the teacher may ask in the elementary classroom to draw out speculations and creative responses from the student.

F 4876 — *Divergent Questions*, secondary. T. 11 min. Color.

Discussed here are the divergent questions which the teacher may ask in the secondary classroom to draw out speculations and creative responses from the students.

F 4873 — *Higher Order Questions*, elementary. T. 10 min. Color.

The technique of asking "high order questions" in the elementary classroom is treated here. Such questions stimulate analytical thinking and active learning in the student.

F 4874 — *Higher Order Questions*, secondary. T. 10 min. Color.

This film discusses the techniques of asking "higher order questions" in the secondary classroom. Such questions stimulate analytical thinking and active learning in the student.

F 4689 — *Teaching Language: Dictionaries and Definitions*. J.S. 55 min. B&W.

Various methods are examined that deal with teaching language in general and the dictionary in particular. Two students are shown as they use the dictionaries, and a tenth grade class is guided through an inductive lesson on various kinds of definitions. Grades 7-12.

F 4699 — *Teaching Reading in the Secondary Schools, Part 4. Vocabulary Development*. J.S. 19 min. B&W.

Tips are given for teachers to help students in improving their reading vocabulary. Grades 7-12.

F 4700 — *Teaching Reading in the Secondary Schools, Part 5. Developing Comprehension Skills*. J.S. 12 min. B&W.

The film presents two teachers, one demonstrating the way of teaching how to read for main ideas and the other helping students to apply similar techniques in reading their assigned text. Grades 7-12.

F 4701 — *Teaching Reading in the Secondary Schools, Part 6. Read to Remember*. J.S.

This film illustrates the teaching procedures for developing study skills in reading and examines the study techniques of good students. Grades 7-12.

F 4702 — *Teaching Reading in the Secondary Schools, Part 7. The Library and the Reading Program*.

How the library and librarian contribute to an all-school reading program is demonstrated in this film, and how the teachers use the library and develop research skills. Grades 7-12.

F 4703 — *Teaching Reading in the Secondary Schools, Part 8. Developing Skills for Reading Literature*. J.S. 12 min. B&W

This film illustrates how to develop skills that are needed for reading imaginative literature at various grade levels. Grades 7-12.

Books for Students



471

459

BOOKS FOR STUDENTS

Adelson, Leone. *Dandelions Don't Bite*. New York: Pantheon, 1972.

This charming book, dealing with stories and histories of words, is useful for category 1, Word Meanings.

Grades 5-7

Asimov, Isaac. *Words of Science and the History Behind Them*. Boston: Houghton Mifflin, 1959.

The history of scientific words detailed here would appeal to some students and should help to enrich their vocabulary.

Grades 4-9

Ball, John. *Johnny Get Your Gun*. Boston: Little, Brown and Co., 1969.

When Johnny's radio is stolen, he gets his father's gun. A useful story to predict what Johnny will do with the gun.

Grade 7 up

Chase, Richard. *Jack Tales*. Boston: Houghton Mifflin, 1943.

These tales come from the Appalachian Mountains and are written in the dialect of the mountain people. The stories are amusing and have high appeal.

Grades 4-8

Edmonds, D.G. *Motorcycling for Beginners, A Manual for Safe Riding*. Philadelphia: Macrae Smith Co., 1972.

A how-to book about every aspect of cycling, lending itself to discussions involving Translation and Interpretation.

Grades 7-12

Ellison, U.H. *The Pooh Cookbook*. New York: E.P. Dutton, 1969.

Inspired by *Winnie-the-Pooh* and *The House on Pooh Corner*. Most recipes contain a lot of honey.

Grades 3-6

Greene, Amsel. *Pullet Surprise*. Glenview, Ill.: Scott Foresman & Co., 1973.

This collection of bloopers, boners, and boobos by high school students is both amusing and instructive. This should prove to be a useful book in literal and figurative development as well as word meaning and vocabulary development.

Grade 7 up

Greet, W. Cabel; Jenkins, William A.; and Schiller, Andrew. *In Other Words . . . A Beginning Thesaurus and Exercise Book*. Glenview, Ill.: Scott Foresman & Co., 1968.

This is an easy-to-use thesaurus in a dictionary format with cross references. It has bright picture pages which show how words are related but not interchangeable.

Grades 4-6

Handbook of Job Facts. Chicago: Science Research Associates, 1963.

This handbook is useful for practicing indexing skills. It contains a listing of job facts and aspects. It also gives the qualifications necessary for each job listed. This book will be useful in career education as well as to practice Location/Recall skills.

Grade 7 up

Hanson, Joan. *Homonyms: Hair and Hare and Other Words That Sound the Same but Look As Different As Bear and Bare.* Minneapolis: Lerner Publication, Inc., 1972.

Humorous illustrations demonstrate homonyms. Other books in this group by Joan Hanson include:

Antonyms: Hot and Cold and Other Words That are Different as Day and Night.

Homographs: Bow and Bow and Other Words that Look the Same but Sound Different as Sow and Sow.

Synonyms: French Fries and Chips and Other Words That Mean the Same Thing but Look as Different as Truck and Lorry.

Grades K-6

Jones, Robert M. *Can Elephants Swim?* New York: Time-Life Books, 1969.

Here is a reference book that answers zany questions such as "Can elephants swim?" This book is useful for practicing indexing skills. The *Guinness Book of Records* is also fun to use. Students enjoy looking up questions in these books.

Grade 6 up

The Last Whole Earth Catalog. New York: Portola Institute, Inc./Random House, 1971.

This catalog lists and describes inexpensive and unusual, but useful, items. Information includes availability by mail, evaluations of quality, and relevancy of the item to independent education.

Grades 7-12

Leodhas, Sorche Nic. *Always Room for One More.* New York: Holt, Rinehart and Winston, Inc., 1965.

This Caldecott Medal winner is written in a Scottish dialect. It is useful in studying cultural dialects:

"There was a wee house in the heather--
'Twas a bit 'o a but and a ben--
And in it there lived all together
Lachie MacLachlan
And his good wife
and his bairns to 'ohe number of ten."

Grades 3-6

Levine, Lois. *The Kids in the Kitchen Cookbook, How to Teach Your Child the Delights of Cooking and Eating.* New York: MacMillan Co., 1968.

This is an excellent cookbook for junior high age children.

Grades 7-9

McFarland, Kenton D. *Midget Motoring and Karting.* New York: E.P. Dutton, 1961.

Directions for building and racing midget cars are provided.

Grades 6-12

MacGregor, Carol. *The Storybook Cookbook*. Doubleday & Co., Inc., 1967.

The author includes short synopses of books along with recipes such as "Chincoteague Pot Pie" and "The Queen of Hearts' Strawberry Tarts."

Grades 4-6

MacPherson, Tom. *Dragging, Driving, and Basic Customizing*. New York: G.P. Putnam's Sons, 1972.

Directions on how to customize a car are included in this book.

Grades 7-12

Maile, Anne. *Tie and Dye Made Easy*. New York: Taplinger Publishing Co., 1971.

The author gives illustrated examples of how to make various patterns and designs by a variety of tie and dye methods.

Grades 7-12

Moore, Eva. *The Lucky Cookbook for Boys and Girls*. Englewood Cliffs, N.J.: Scholastic Book Service, 1969. pbk.

This cookbook has easy-to-read recipes.

Grades 7-12

O'Neill, Mary. *Words, Words, Words*. Garden City, N.Y.: Doubleday & Co., Inc., 1966.

These poems about a variety of words may be useful in Word Meaning as well as other categories of Comprehension.

Grades 4-12

Razzi, James. *Simply Fun! Things to Make and Do*. New York: Parents Magazine Press, 1968.

The author provides easy-to-read directions for making and doing such things as a floating head trick or a walking face.

Grades 4-6

Sattler, Helen Roney. *Kitchen Carton Crafts*. New York: Lothrop, Lee and Shepard, Inc., 1970.

Activities range from making a pencil rack out of a milk carton to making a cowboy and sheriff hat out of an ice cream carton.

Grades 4-6

Sobal, Donald J. *Encyclopedia Brown Solves Them All*. Camden: Thomas Nelson Company, 1968.

Encyclopedia Brown Keeps the Peace. Camden: Thomas Nelson Company, 1969.

Encyclopedia Brown Boy Detective. Camden: Thomas Nelson Company, 1966.

Encyclopedia Brown Finds the Clues. Camden: Thomas Nelson Company, 1966.

Encyclopedia Brown Gets His Man. Camden: Thomas Nelson Company, 1967.

These are good books for predicting outcome. Mystery or problems are presented, and many clues are given. Students try to guess the outcomes, using the given clues. Answers and explanations are found at the back of the books.

Wainwright, Ann. *Girls and Boys Easy to Cook Book*. New York: Young Readers' Press, 1967. pbk.

This cookbook has easy to read recipes.

Grades 3-6

Winslow, Margorie. *Mud Pies and Other Recipes*. New York: Collier Books, 1961. pbk.

This is an unusual book of cute recipes for dolls to follow such as "Roast Rocks," "Grilled Mud Sandwiches," and "Boiled Buttons."

Grades 3-6

Other Instructional Media for Students

BOOKS
KITS

SKILLS TEXTS

skills booklets

transparencies

reading series

TAPES

FILMS



OTHER INSTRUCTIONAL MEDIA FOR STUDENTS

Note: Items in the Annotated Listing below have been arranged by publisher. These same materials are listed in the Bibliography alphabetically by category of material (Films, Kits, Nonprint, etc.), each item listed alphabetically within each category.

An asterisk indicates high-interest low-vocabulary level material.

ALLYN & BACON, INC.

Study Skills for Information Retrieval, Books 1, 2, 3.
Donald Barnes and Arlene Burgdorf

SKILLS BOOKS

These workbooks provide practice in using reference tools as well as developing study skills. There is provision for practice in interpretation of graphs, use of magazines, specialized dictionaries, etc.

Grades 4-12

**Breakthrough*

READING SERIES

This is a series of paperback books containing a selection of modern short stories, articles, biographies, and poetry. Such authors as Claude Brown, Dick Gregory, and Ray Bradbury are included. These books should appeal to both junior and senior high students but have been written at a lower reading level, ranging from 3rd to 6th grade. Reading skills activities are included for those students who need extra help. Teachers' guides include lesson plans with simple comprehension checks.

Grades 7-12

AMERICAN EDUCATION PUBLICATIONS

Table and Graph Skills

SKILLS BOOKLETS

This series gives students, Grades 3-6, a sequential plan for learning how to think and read tables and graphs. Books C and D (used in 5th and 6th grades) place heavy emphasis on critical and creative reading, showing, for example, how tables and graphs can be used for good and bad propaganda.

Students construct tables and graphs of their own. A skill may begin in Book A for Grade 3 and extend through the program.

Grade 3 up

Read, Study, Think

SKILLS BOOKLETS

This is a series of practice booklets designed to improve reading comprehension. Four major reading skills are developed and applied to picture reading as well as the printed word. The four areas are literal reading; interpretative reading and drawing generalizations; critical thinking; and organizing information.

Grades 2-6

New Science Reading Adventures

SKILLS BOOKLETS

This is a series of reading skill builders for Grades 1-6. Each book uses science topics to capture students' imaginations and to help them improve their ability to read and understand science facts.

Grades 1-6

Reading Success Series

SKILLS BOOKLETS

Each booklet in this series of six basic reading skills booklets contains materials that should appeal to reluctant readers. The booklets deal with word meaning, using context clues, and phonetic analysis. Answer keys are provided.

Grades 5-10

Read Treasure Chest

SKILLS BOOKLET

Seventeen stories and poems are each followed by a self-directed exercise. Students strengthen their comprehension and vocabulary skills.

Grades 7-9

Stories You Can Finish

SKILLS BOOKLET

This booklet presents the beginnings of nine stories with just enough plot, character development, and setting to encourage students to complete their own versions.

Grades 7-9

BARNELL LOFT, LTD.

The Picto-Cabulary Series: Basic Words Sets

KIT

This kit and the two which are listed below concentrate on direct vocabulary instruction. Pictures and instructional lessons are in booklet format which can be used independently, in paired-learning, or in small group work. Answer keys are included for each booklet.

Grades 1-2

The Picto-Cabulary Series: Words to Wear, Words to Eat, Words to Meet

KIT

Sample topics in this kit include:

Words to Wear: Sombreros, Southwesterners' Stovepipes

Words to Meet: Footings, Frames, and Foundations

Words to Eat: Apricots, Avocados, and Artichokes

Grades 3-4

The Picto-Cabulary Series: Series 111 and 222

KIT

Sample topics in this kit include:

Stubby Beards & Gaunt Faces

Leggy Colts & Speckled Hens

Succulent Steaks & Fragrant Flowers

Grades 5-9

These booklets are titled: Using the Context; Locating the Answer; Getting the Main Idea; Working with Sounds; Following Directions; Getting the Facts; Drawing Conclusions; and Detecting the Sequence. Levels for each title range from Book A (12) through Book F (62). Booklets may be purchased individually or in multi-level kits.

Grades 1-9

BENEFIC PRESS*The Thinking Box*

KIT

This kit contains activities using music, art, social studies, mathematics, language arts, and science in synthesis, problem-solving, drawing conclusions, inferences, and hypotheses. Extra self-help cards may be used in group or individualized activities. The cards include graphic and photo reading as well as printed matter in all subject areas. (Several sample lessons are included in the Learning Activities sections.)

Grades 5-9

BOWMAR PUBLISHING COMPANY

**Horse Trail Ride (Gold Cup Games)*
Dune Buggy Rally (Gold Cup Games)
Motorcycle Motocross (Gold Cup Games)

GAMES

Each of these board games emphasizes vocabulary, word recognition, sequence, following directions, and knowledge of the game subject. 2-6 players.

Grades 3-12

CAMBRIDGE BOOK COMPANY*Cambridge Reading Work-A-Text*

SKILLS BOOKS

The authors have designed a system for K-6 (two books for each level) to provide meaningful reading activities. A wide range of materials from history, science, and social studies are used for developing comprehension skills — interpretation, summarizing, and vocabulary expansion.

Grades K-6

CENCO

Homonym Poster Cards

GAME

This is a vocabulary building game. Cards have simple sentences to show different meanings. 60 word pairs.

Grades 2-6

Synonym Poster Cards

GAME

This also is a vocabulary building game. Cards have simple sentences to show same or similar meanings. 60 word pairs.

Grades 2-6

Educational Password

GAME

Basic sight and picture vocabulary words found in primary and elementary readers are used. Entire class can play.

Grades 2-6

CURRICULUM ASSOCIATES

Dictionary Skills

SKILLS BOOKS

A placement exercise is included so that students may work on needed specific skills areas. The materials are designed for individual or paired-learning. Answers are provided at the end of each booklet.

Grades 4-9

Organization Skills

SKILLS BOOKS

Two to four brief activities on each skill cover a total of seven different comprehension skills (example: sequencing, main ideas, sub-topics). The booklets may be used independently by individuals or by paired-teams.

Grades 4-9

Vocabulary Builder Series

GAMES

Phantonyms

This vocabulary game consists of hidden antonyms. The dictionary must be used to solve word mysteries in the 110 antonym puzzles which are representative of varied levels of difficulty.

Grades 4-12

Synonyms

This vocabulary game relies on basic word knowledge plus quick thinking. Crazy clues help reveal unknown synonyms.

Grades 4-12

Syllabo

This vocabulary game uses syllables to open doors to word building. There is sufficient ungraded material for twenty-six groups of students.

Grades 4-12

Working with Words

SKILLS BOOKS

Writing exercises are presented in a different format on each page to encourage students to want to write, to seek out new words, and to share words. The booklets are designed for individual or paired-learning.

Grades 3-6

D. C. HEATH AND COMPANY

A Listening-Reading Program

KIT

Each story presented on each of the six levels is recorded. As each story reaches its high point, the record stops and the students must go to their story brochures to read the conclusion. After reading, students work with response sheets which help with critical thinking skills. Parts of the kits may be purchased separately. This is a useful kit to use with Prediction activities.

Grades 4-5

EDUCATIONAL DEVELOPMENT LABORATORY/MCGRAW HILL BOOK COMPANY, INC.

Listen and Read. Tapes D.

TAPES/SKILL TEXTS

These tapes are part of the Aud-x program. The tapes and booklets are designed to instruct in specific skills such as visualizing, identifying main ideas, predicting outcomes, and using maps and graphs.

Grades 3-6

Reference Skills (Study Skills Library)

KITS

Science Skills (Study Skills Library)

Social Studies Skills (Study Skills Library)

Each kit contains practice exercises in reading comprehension in the appropriate subject area. Some skills include finding authors' purposes, verifying accuracy, and drawing conclusions.

Grades 4-9

EDUCATIONAL PROGRESS CORPORATION

**Clues to Reading*

KIT

This kit uses a comic book format and taped stories to teach essential reading skills. Assessment tasks and lessons are keyed to specific comprehension and phonetic skills. Readability levels (2.0 - 5.0). Interest level should be through 9th grade because of the format.

Grades 5-9

ENCYCLOPAEDIA BRITANNICA CORPORATION

Using the Library

FILMSTRIP

This set surveys the tools useful in media research. Titles include:

Your Library, a World of Work
The Card Catalog
The Classification of Books
Using the Dictionary
Using the Encyclopaedia
Using Special Reference Books

Grades 4-7

Library Reference Skills

TRANSPARENCIES

Transparencies survey dictionaries, encyclopedias, and other reference books. Student resource books are also available to further practice these Location and Recall skills.

Grades 4-7

EYEGATE HOUSE, INC.

Comparisons, Assumptions, Problem Solving, Summarizing, Observing, Analyzing. (Fundamentals of Thinking Series)
Louis E. Rath

FILMSTRIPS

Each of these filmstrips provides opportunities for students to practice specific comprehension skills. Each begins by defining the comprehension category and then goes on to give examples of the skills being applied.

Grades 4-8

FIELD EDUCATIONAL PUBLICATIONS, INC.

**Cornerstone Reading Series*

SKILLS BOOKS

This is a series of five books designed to develop reading comprehension and study skills with older elementary students reading at a lower level. Materials have been selected from social studies, science, and literature. Reading levels vary from Grades 1 to 4.

Grades 1-6

**Kaleidoscope Readers*

SKILLS BOOKS

This set of eight books with short stories includes comprehension exercises which follow each story. Titles of the books code the reading level such as *One Thing at Once* (Grade 1), and *Four Corners of the Sky* (Grade 4). The series is designed to appeal to older students' interests.

Grades 6-12

FORDHAM EQUIPMENT AND PUBLISHING COMPANY

Libraries Are for Children

DITTO MASTERS

These are duplicating masters of activities using encyclopedias, dictionaries, atlases, indices. . .

Grades 4-6

GINN & COMPANY, INC.

Read Better, Learn More, Books A, B, C
Theodore Clymer, et al.

SKILLS BOOKS

Content reading in these books provides direct instruction to students in handling mathematics, science, and social science books. They are designed for independent and/or peer-instruction with answers provided for the longer exercises.

Grades 4-9

GLOBE BOOK COMPANY

Better Reading

SKILLS BOOK

This book contains short reading selections and aids in developing various comprehension skills such as finding key thoughts, inferences, purpose of reading, and dictionary skills.

Grades 5-8

Programmed Reading

SKILLS BOOKLET

This is a systematic, step-by-step presentation of material in frames, each containing information followed by questions that the student answers when he reads the information in the frame. Some of the contents are finding the main idea; finding key sentences in paragraphs; details; prediction; synonyms; and dictionary and encyclopedia skills.

Grades 7-9

**Real Stories, Books I and II*

SKILLS BOOK

Both Book I and Book II consist of short newspaper and magazine real life stories. A number of exercises follow each article dealing with vocabulary development, sequence, synthesis, application, and interpretation. Reading level for Book I is about 4.5-5; for Book II, about 5-6.

Grades 7-9

GROLIER EDUCATIONAL CORPORATION

**Reading Attainment System*

KIT

Reading selections are printed on four-sided cards. They include diverse topics for high interest, for example: "The Okefenokee Swamp — Land of Mystery," "Buying a Guitar," "How to Build Weights for Weight Lifting," and "Jobs in the Computer Industry." Skill cards included for each reading selection stress basic reading and vocabulary building. System 1 includes reading levels 3 to 4.5. System 2 includes reading levels 5 to 6.5.

Grades 7-12

HARCOURT BRACE JOVANOVICH, INC.

Bookmark Reading Series

SKILLS READERS

These skill texts use social studies, mathematics, and science materials to teach main and supporting ideas, inferences, critical reading, and thinking skills. The texts are part of the *Bookmark Reading Program*.

Grades 4-6

HOLT, RINEHART AND WINSTON, INC.

Sounds of Language Series

LANGUAGE SERIES

Developed by Bill Martin in collaboration with Peggy Brogan, these language books deal with the "melody of language" to help children find meaning in print. The thrust in this series is the development of sensitivity to three levels of language: "home-rooted language" (vernacular); public language (factual); and "life-lifting language" (poetry and literature). Tapes accompany each book. Some titles include "Sounds of Mystery," "Sounds of the Young Hunter," and "Sounds of Home."

Grades K-6

Instant Readers, Levels I, II, III

BOOKS/TAPES

These books and cassettes by Bill Martin, Jr., emphasize the structure and sound of language. The books have interesting design and print arrangements. The use of both voice and music is also unusual.

Grades K-6

LEARNING RESEARCH ASSOCIATES, INC.

The Literature Sampler (Jr. edition)
Compiled by Mae Durham

KIT

The kit includes samples of 120 books, with questions about each, followed by a discussion of reasons for both incorrect and correct responses. Reading levels 2-9.

Grade 4 up

The Literature Sampler (Secondary edition)

KIT

The kit contains samples of 120 books, with questions about each, followed by a discussion of reasons for both incorrect and correct response. Reading levels 5-11.

Grade 7 up

J. B. LIPPINCOTT CO.

Reading for Meaning

SKILLS BOOK

Books 4-12 contain short reading selections. Vocabulary and comprehension exercises follow each selection.

Grades 4-12

MACMILLAN AND COMPANY, INC.

Macmillan Spectrum of Skills

SKILLS BOOKLETS

An instructional program allows each student to work at specific skills at his own pace. The three skill areas are Word Analysis, Vocabulary Development, and Reading Comprehension. The skills are divided into six learning levels.

Grades 4-9

CHARLES MERRILL PUBLISHING CO.

Merrill Reading Skilltexts and Skiltapes

TAPES/SKILLTEXTS

This series emphasizes judgment, interpretation, and organizing ideas. Text-workbook materials permit the student to check himself from tapes.

Grades 1-6

MILLIKEN PUBLISHING CO.

Basic Library Skills

TRANSPARENCIES

This useful booklet contains 12 color transparencies and 24 dittoes which are helpful in Location and Recall activities.

Grades 5-7

References Tools and Study Skills

TRANSPARENCIES

Like the booklet on *Basic Library Skills* (above), this booklet also contains 12 color transparencies and 24 dittoes which are useful in Location and Recall activities.

Grades 5-7

NOBLE & NOBLE PUBLISHERS, INC.

Yearling Individualized Reading Program

KIT

The two-part program consists of the "Reading Center" and the "Skills Center." The "Skills Center" gives instruction and practice in vocabulary development, word attack, and comprehension skills appropriate to the Yearling classic titles in the "Reading Center." Procedures and teaching strategies are given in the teacher's guide.

Grades 3-5

PACIFIC PRODUCTIONS, EDUCATIONAL FILM DIVISION

Locating Facts in Books

FILMSTRIP

Table of Contents, Index, and Skimming are presented in this filmstrip.

Grades 3-6

Using Study Helps in Books

FILMSTRIP

This filmstrip suggests uses of headings, footnotes, bibliographies, study questions, and glossaries.

Grades 4-7

PRENTICE-HALL, INC.

Be a Better Reader (3rd ed.)
Nila Banton Smith

SKILLS BOOKS

This series of paperback books emphasizes skills in Smith's four levels of reading: literal, interpretation, critical, and creative. The exercises include all disciplines such as mathematics, science, social studies, and English. The books are sequentially developed according to levels beginning with Foundations A — 4th grade through Book IV — 12th grade.

One to One (Jr. edition)
Leland B. Jacobs

KIT

This individualized reading program provides practice for students in all categories of comprehension skills by using literature selections. Different types of literature are involved such as poetry, non-fiction, general biography, and short stories.

Grades 1-3

One to One
Leland B. Jacobs

KIT

This kit is a more advanced version of the junior edition. All literature selections are geared to the intermediate level.

Grades 4-6

RANDOM HOUSE/SINGER

Launch
(Mission Read Series)

KIT

This supplementary reading program emphasizes listening skills, vocabulary, word recognition, and comprehension. Practice cards accompany the stories. *Reach* and *Search* are also approved.

Grades 2-4

Aware

KIT

This is a poetry learning kit which contains activity cards, tapes, and booklets dealing with sight, sound, touch, taste, and smell. Tapes explore such things as "A Sound Walk," "The Taste of Ice Cream," and color words. The kit has thought, exploration, language arts, and focus activities such as using braille cards.

Grade 7 up

Random House Skilpacers

KIT

This kit aids students in improving comprehension skills such as finding the main idea, recall of detail, following sequence of events, predicting outcomes.

Grades 2-8

READER'S DIGEST SERVICES, INC.

Reader's Digest Reading/Audio Program

SKILLS BOOKS

Skill Builder books (50 different titles) include fiction and non-fiction with exercises and quizzes covering varied comprehension abilities such as summarizing, comparing, application, and vocabulary building. Cassettes, duplicating masters, and practice pads may be used in conjunction with the books. Materials are available individually or as kits. Skill Builder Kits:

Primary (Reading Levels 1 to 4)

Intermediate (Reading Levels 2 to 6)

Advanced (Reading Levels 4 to 10)

Grades 4-12

SCHOLASTIC MAGAZINES, INC.

Individualized Reading Kits

KIT

Classroom Units Grades 1-6

These kits contain over 100 paperback books. Each kit has conference cards for each book which emphasize comprehension and critical thinking skills. Each kit also has activity cards as well as student record-keeping books. Supplementary kits containing 25 titles that are at the highest 3-6 levels are also available for purchase.

Grades K-6

**Imagination: The World of Inner Space*
(Contact Reading Series)

KIT

The kit contains stories and pictures to help develop imagination. Asks students such questions as "Fact or Fiction?", "Are You Superstitious?", and "Is There Something Out There We Don't Know About?" Anthology contains stories about these questions. The workbook contains a variety of activities dealing with all types of comprehension skills. Reading level 4-6 with high interest appeal.

Some others in the Contact Series include *Getting Together: Problems You Face*; *Drugs: Insights and Illusions*; *Environment: Earth in Crisis*.

Grades 7-9

**Maturity: Growing Up Strong*
(Contact Reading Series)

KIT

This Scope Literature/Contact kit is designed to help students who read at a lower level to read, speak, and write better.

Grades 8-10

***Action**

KIT

Here is a kit designed to appeal to junior and senior high students with severe reading problems. Sports stories are on a 2.0-4.0 level of reading difficulty. Skills include inference, sequence, vocabulary, and basic word-attack. Anthology includes *The Fallen Angel* and other stories.

Grades 6-12

***Gathering the News* (News Skills)**

SKILLS BOOK

This book contains basic definitions of the news and how different news media collect, evaluate, and disseminate news. It also gives clues as to how to get the most out of the newspaper.

Grades 4-8

***Understanding the News* (News Skills)**

SKILLS BOOK

This booklet contains information on how to develop the power of critical, creative, independent evaluation of news from different sources.

Grades 4-8

***Reading Without Words* (Study Skills)**

SKILLS BOOK

This book describes how to interpret graphic materials such as photos, diagrams, and cartoons. It is useful in Translation activities and may be used as individualized instruction or as a resource book for teachers to provide more practice in this area.

Grades 4-8

SCIENCE RESEARCH ASSOCIATES, INC.

***Newslab*
(Basic Skills Series)**

KIT

This kit is designed for use as supplementary material to help children read and interpret newspapers. Individual newsguides can be used with current papers. Twelve newspaper sections are discussed.

Grades 4-6

***Graph and Picture Study Kit*
(Basic Skills Series)**

KIT

The kit helps students interpret illustrative material such as photographs, editorial cartoons, graphic data, charts, and diagrams. Useful in supplementary and individualized material.

Grades 4-6

***Map and Globe Skills Kit*
(Basic Skills Series)**

KIT

The kit helps students develop skills essential in using information found in maps and globes.

Grades 4-8

Organizing and Reporting Skills Kit
(Basic Skills Series)

KIT

This is an individualized program which focuses on basic elements of reporting, note-taking, and outlining.

Grades 4-6

An American Album

KIT

This kit contains reading selections about the history of America from Columbus to President Kennedy. Each selection has comprehension questions and answers. Reading levels (3.0-8.9)

Grades 4-8

We Are Black (Reading and Language)

KIT

Reading selections from books and periodicals include biographies, anecdotes, and essays. Skill Cards check comprehension and vocabulary. This subject area kit should have high appeal. Reading level (2.0-6.0)

Grade 4 up

Reading for Understanding (Senior Edition)

KIT

This comprehensive course in critical reading contains short sentences and paragraphs with comprehension questions. Questions and answers coded on cards.

Grades 8-12

**The Job Ahead: New Rochester Occupational Reading Series*

READING SERIES

Multi-level text consisting of three hardbound books:

Level I — second grade reading level

Level II — third/fourth grade reading level

Level III — fourth/fifth grade reading level

Five workbooks accompany each text.

The series develops language arts skills and aids in the development of skills needed for success in jobs and in daily life.

Grades 8-12

Better Reading Book

SKILLS BOOKS

Three books comprise this series, with about twenty reading selections followed by vocabulary and comprehension exercises.

Grades 7-9

SCOTT FORESMAN & CO., INC.

Basic Reading Skills

Marion Monroe; Sterling Artley; and Helen M. Robinson

SKILLS BOOKLET

This workbook is divided into three sections: word study, comprehension, and study skills. The comprehension section focuses first on phrases, then sentences, and finally paragraphs.

Grades 7-9

Reading Skills for Young Adults

Olive S. Niles

SKILLS BOOK

These brief exercises are designed to give the student practice in various phases of critical reading, imagery, inference, main idea, and relationships.

Grades 9-12

Tactics in Reading I

Olive Niles; Dorothy Kendall Bracken; Mildred A. Dougherty; Robert Farrar

SKILLS BOOK

This book is designed for the average and below average student who needs more practice than the traditional literature program provides. Each exercise is intended to teach as well as give practice.

Grade 9

Tactics in Reading II

Olive Stafford Niles; Dorothy Kendall Bracken; Mildred A. Dougherty; and Robert Farrar

SKILLS BOOK

Although the book is keyed for use with the *Perspective of the Galaxy Program*, *Tactics II* may be used separately. It is designed for the student who does not derive enough benefit from the traditional literature program.

Grade 10

Choose and Check (Levels 5 and 6)

GAME

These board games give the student multiple choice exercises for varied reading skills. The student may check the accuracy of his/her choice.

Grades 1-2

Word Puzzles (Set 1, Level 2; Set 2, Level 2; Set 3, Level 2)

GAME

Students match full colored pictures with words on a board. Categories of vocabulary development include People, What We Do, Things, and Storybook Characters. Self-checking.

Grade 2

Dictionary Puzzles (Sets 1-5)

GAME

These puzzles provide for practice in selecting correct definitions using guide words, a pronunciation key, and context.

Grade 3 up

SILVER BURDETT CO.

Success in Reading, Books I and II

SKILLS BOOK

The areas of comprehension skills which are stressed in Book I are use of context; word clusters; skimming and scanning; reading for main ideas; supporting details; and unifying ideas. Book II provides for practice in the areas of previewing; reading maps and graphs; remembering what you read; taking notes; finding and applying facts; critical reading; and understanding poetry and fiction.

SOCIETY FOR VISUAL EDUCATION

Using the Elementary School Library

SOUND/FILMSTRIPS

This set of sound/filmstrips covers a wide range of research skills using both print and nonprint materials. Titles include:

Exploring the Library
Getting to Know Books
What's in the Dictionary?
How to Use the Card Catalog
How to Use the Encyclopedia
Skills in Gathering Facts

Grades 4-6

Linguistic Backgrounds of English (Group 1 and 2)

SOUND/FILMSTRIPS

This series of sound/filmstrips discusses word derivations and backgrounds. Some titles include:

What's in a Name?
The Geography of Language
The Language of Culture
Interesting Facts About Your Language

Grade 7 up

3M CORPORATION

Wollensak Teaching Tapes 1 and 2

TAPES/SKILLTEXTS

Reference Books # 1 introduce the student to the alphabetical arrangement of encyclopedias, almanacs, and atlases. An explanation of the location grid is included. Worksheets for students are included.

Reference Books # 2 discuss the purpose of the *Reader's Guide* and the interpretation of entries. Worksheets are provided for the student.

Grades 3-6

TROLL ASSOCIATES

Using Reference Materials

FILMSTRIP

The filmstrip shows various reference tools and focuses on choosing the most appropriate one.

Grades 3-6

UNIVERSITY OF MARYLAND READING CENTER

**Survival Learning Materials*

FUNCTIONAL READING SKILLS BOOKLET

Robert Wilson and Marcia Barnes

This booklet contains exercises using practical applications such as reading labels; reading washing instructions; buying a magazine; completing credit card applications; baking a frozen pie; and many more functional reading type activities. Three levels of questions illustrate each set of learning materials — literal, understanding interpretation, and problem solving. See pages 163 and 236 of this curriculum guide for sample lessons.

Grades 4-12

WEBSTER/MCGRAW-HILL BOOK COMPANY

Reading for Concepts

SKILLS BOOKS

William Liddle

This eight-book series offers contemporary non-fiction in progressive reading levels from 1.6-6.8. Critical reading, drawing conclusions, and making inferences are stressed.

Grades 3-12

New Practice Readers

SKILLS BOOKS

This is a series of books for reading levels 3-8. Pre-reading exercises and comprehension activities are included. Students read the stories and answer questions in seven areas of comprehension such as implied details, true statements, opinion, and similar meanings.

Grades 4-8

**Step Up Your Reading Power*

SKILLS BOOKS

Jim Olson

A series of graded practice readers, this set was designed to develop reading skills for young adults. The stories are appealing to students interested in sports.

Grades 7-12

FILMS

F 1272 — *Action and Reaction*. J. 13 min. B&W.

This film explains Newton's third law in terms of experiments that children can do themselves. It may be especially useful in Prediction activities. Grade 7 up.

F 4661 — *The Bike*. P. 13 min. Color.

This open-ended film presents the quandry of two boys who borrow a bike from a third boy and break it. Grades K-3.

F 4275 — *Finding Information*. P. 11 min. Color.

This film gives an insight into the process of learning by tracing the efforts of a boy acquiring information on how to raise a baby bird. Grades K-3.

F 0986 — *How to Read Newspapers*. J.S. 11 min. B&W.

News sources, newspaper organization, and the role of reporters and editors are all presented here. The film also shows ways to improve newspaper reading skills. Grade 7 up.

F 0985 — *The Importance of Taking Notes*. J.S. 11 min. Color.

The important skills of note-taking are discussed in this film. How to take good notes in oral instruction periods and during reading and how to determine the key ideas for notes are all explained. Grades 7-12.

F 5239 — *Library Series: Research in the Library*. 11 min. Color.

The activities of students of an elementary class are followed as they write reports on Mexico; use the card catalog; locate materials; do reference reading; and use maps. Grades K-3.

F 2743 — *An Occurrence at Owl Creek Bridge*. J.S. 27 min. Color.

This is a dramatic adaptation of Ambrose Bierce's famous Civil War story, told in flashback during the hanging of a young man being executed for sabotage. It may be useful for Prediction activities. Grade 10 and up.

F 4495 — *Reading and Critical Thinking*. P. 15 min. Color.

Students can develop critical thinking through reading — in learning to distinguish opinion from fact by verifying facts through research, and by assessing an author's point of view. Grade 3 up.

F 4843 — *Reading Growth, Part 1: Basic Skills*. J.S. 14 min. Color.

A good reader is defined as a person who is interested in word meaning, knows how to find the big ideas, has different reading speeds, and is skilled at creative reading. Grades 7-12.

F 6029A — *Reading Growth: Reading Creatively*. I. 13 min. Color.

This film shows that a creative reader questions and checks facts, compares sources, and uses what he reads to enrich his life. This film was developed by Theodore L. Harris. It may be especially useful in activities stressing Comprehension at all levels.

F 6028A — *Reading Growth/Adjusting Your Reading Speed*. I. 13 min. Color.

This film shows why we need several reading speeds; how we can learn to adjust our reading speeds; how our purpose for reading affects speed; and how the material we are reading affects speed. This film was developed by Theodore L. Harris for use in all levels of Comprehension.

F 6027A -- *Reading Growth/Getting the Big Ideas*. I.J. 13 min. Color.

This film shows what a big idea is; how to find the big ideas in non-fiction; how to find the big ideas in fiction; and how finding the big ideas helps one remember and understand what is read. This series was developed by Theodore L. Harris for use in all areas of comprehension.

F 6026A -- *Reading Growth/Understanding Word Meanings*. I.J. 13 min. Color.

This film discusses why we should understand word meanings; using context clues; using structural analysis; and using the dictionary. This series was developed by Theodore L. Harris.

F 1567 -- *Reading Improvement: Vocabulary Skills*. P.I.J.S. 11 min. B&W.

The film suggests specific vocabulary skills and exercises which increase reading effectiveness. All levels.

F 4488 -- *Reading in the Humanities*. P. 14 min. Color.

The peculiarities of books in different subject areas are explained, and there is an analysis of methods of teaching children how to adjust reading skills to specialized reading in the humanities. Grade 3 up.

F 4494 -- *Reading in the Math-Science Areas*. P. 14 min. Color.

The film explains the importance of understanding organization processes and being aware of the significance of special symbols in reading specialized materials in the sciences and in mathematics. Grade 3 up.

F 5464 -- *Reading Stories: Characters and Settings*. I.J. 11 min. Color.

How a good storyteller makes both characters and settings become real is illustrated in this film. Grade 4 up.

F 5463 -- *Reading Stories: Plots and Themes*. I.J. 14 min. Color.

The interrelationship of a story's plot and its theme is shown in this film. Grade 4 up.

F 4847 -- *What If?* P.S. 3 min. Color.

Four situations are presented and students are asked to work out appropriate responses to those situations. This film may be especially useful in Prediction activities. Grades K-2.

F 2937 -- *You'll Find It in the Library*. P. 14 min.

This film shows how to locate books in a library by subject, author, and title. Grades K-3.

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OTHER INSTRUCTIONAL MEDIA FOR STUDENTS

Films

- F 1272 *Action and Reaction*. J. 13 min. b&w.
- F 4661 *The Bike*. P. 13 min. color.
- F 4875 *Divergent Questions, Elementary*. T. 10 min. color.
- F 4876 *Divergent Questions, Secondary*. T. 11 min. color.
- F 4275 *Finding Information*. P. 11 min. color.
- F 4873 *Higher Order Questions, Elementary*. T. 10 min. color.

- F 4874 *Higher Order Questions, Secondary*. T. 10 min. color.
- F 0986 *How to Read Newspapers*. J.S. 11 min. b&w.
- F 0985 *The Importance of Taking Notes*. J.S. 11 min. color.
- F 5239 *Library Series: Research in the Library*. P. 11 min. color.
- F 2743 *An Occurrence at Owl Creek Bridge*. J.S. 27 min. color.
- F 4495 *Reading and Critical Thinking*. P. 15 min. color.
- F 6028 *Reading Growth/Adjusting Your Reading Speed*. I.J. 13 min. color.
- F 4843 *Reading Growth, Part 1: Basic Skills*. J.S. 14 min. color.
- F 6027 *Reading Growth/Getting the Big Ideas*. I.J. 13 min. color.
- F 6029 *Reading Growth/Reading Creatively*. I.J. 13 min. color.
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